



US Army Corps
of Engineers
Pittsburgh District

Monongahela River Navigation Charts

Pittsburgh, Pennsylvania to Fairmont, West Virginia

January 2004



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NAVIGATION CHARTS
MONONGAHELA RIVER
U.S. ARMY ENGINEER DISTRICT, PITTSBURGH
PITTSBURGH, PA. TO FAIRMONT, W.VA.

U.S. ARMY ENGINEER DISTRICT, PITTSBURGH
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Revised: 1 January 2004

Information shown on this chart is a general depiction of the waterway and adjacent areas only and is not in anyway to be construed as representing precise or accurate dimensions, portrayals, features, or other data. Major changes which occur will be published in “NOTICES TO NAVIGATION INTERESTS.”

The general locations of AIDS-TO NAVIGATION are shown, as they existed on the last editing date of this book. They may subsequently have been moved, destroyed or discontinued. They should in no event be used to fix the position of a vessel.

PLEASE BE ADVISED FOR BRADDOCK POOL ONLY - Charts 4 thru 7 depict *current* (2004) Pool El. of 718.7. Operation of the Interim Pool Elevation may fluctuate up to El. 721.8. All Gauges and Vertical Bridge Clearances are still referenced from Normal Project Pool El. 718.7 – *Future Changes in Project Pool Elevation will be published in “NOTICES TO NAVIGATION INTERESTS”.*

The source mapping used to develop and portray the information shown on these charts were compiled from aerial photography exposed March and April 1990 for charts 1 thru 34 and April 1999 for chart 34. The Geographic Coordinates represented were converted from the source mapping Horizontal Grid Data, State Plane Coordinate System, NAD 83 (86) utilizing Conversion software. The grid annotated on these charts are for general reference and not to be used for precise location of features.

The minimum channel depth depicted on these charts was developed from soundings data obtained on October 1989, March 1990 for charts 1 thru 34 and August 1999 for charts 5 - 34.

NAVIGATION CHARTS AND NOTICES

Spiral-bound Allegheny, Monongahela and Ohio River Navigation Charts are available for purchase from the U.S. Government Printing Office by internet, telephone, fax or mail order.

- Internet U.S. Government Online Bookstore at <http://bookstore.gpo.gov>
- Telephone (202) 512-1800 or Toll-Free (866) 512-1800
Monday through Friday, 7:30 a.m. - 9:00 p.m. EST
- Fax (202) 512-2250
- Mail Order Superintendent of Documents
P.O. Box 371954
Pittsburgh, PA 15250-7954

Payment must accompany all orders and can be made by check, money order, Visa, MasterCard, Discover/NOVUS, American Express or Superintendent of Documents Deposit Account. Checks and money orders should be made payable to the Superintendent of Documents. All credit card orders must include the account number and expiration date of the credit card. Payments made by Superintendent of Documents deposit account must include the account number.

When ordering by internet, enter "River Navigation Charts" in the Search the Sales Product Catalog field and click on the Submit button. Click on the Add to Cart icon and follow the instructions provided to order your navigation chart(s).

Information on how to order spiral-bound copies of navigation charts for the Allegheny, Monongahela and Ohio Rivers is also available on the Pittsburgh District internet site at www.lrp.usace.army.mil/nav/navcharts.htm. Links to access navigation charts outside the Pittsburgh District boundaries are also available on our internet site.

Notices to Navigation Interests, containing data on channel conditions and location of dredges, are issued as occasions demand. Pittsburgh District's Notices to Navigation Interests are available on our internet site (www.lrp.usace.army.mil) for viewing and printing. Interested parties, who send a request to:

Chief, Regulatory Branch
U.S. Army Engineer District, Pittsburgh
William S. Moorhead Federal Building
1000 Liberty Avenue
Pittsburgh, PA 15222-4186

are placed on a mailing list to receive either electronic or printed copies of these notices.

NAVIGATION CHARTS

Allegheny River: Charts 1 – 21
Monongahela River: Charts 1 – 34
Ohio River (Cairo, IL to Foster, KY): Charts 1 – 122
Ohio River (Foster, KY to New Martinsville, WV): Charts 122 – 186
Ohio River (New Martinsville, WV to Pittsburgh, PA): Charts 187 – 224

MILE POINTS

Mile points are shown on the charts at one mile intervals, with figures designating mileage above (the Point) Pittsburgh, Pennsylvania.

BUOYS

Buoys used to mark channels in the Mississippi River System conform to the standard lateral system of buoyage on the Western Rivers of the United States. Generally, the unlighted buoys in the Allegheny, Monongahela and Ohio Rivers are equipped with radar reflectors. All buoys are equipped with reflective material; buoys on the left descending side of the channel reflect red; buoys on the right descending side of the channel reflect green.

GAGES

All gages read 9 feet at normal pool level, except as otherwise noted on charts. All elevations based on N.G.V.D. (National Geodetic Vertical Datum).

PERMITS-JURISDICTION

In the administration of laws enacted by Congress for the protection and preservation of navigation and the navigable waters of the United States, the U.S. Army Corps of Engineers exercises jurisdiction over the Allegheny, Monongahela and Ohio Rivers. Work or structures in, under, or over the Allegheny, Monongahela and Ohio Rivers between the limits of ordinary high water lines on both banks of the stream require prior authorization. Inquiries regarding permits for such work or structures should be addressed to:

District Engineer
U.S. Army Engineer District, Pittsburgh
William S. Moorhead Federal Building
1000 Liberty Avenue
Pittsburgh, PA 15222-4186
or may be made by telephone to: (412) 395-7152

PITTSBURGH DISTRICT INTERNET
SITES OF INTEREST TO NAVIGATION

Pittsburgh District:
www.lrp.usace.army.mil

Navigation Chart Information:
www.lrp.usace.army.mil/nav/navcharts.htm

Notices to Navigation Interests:
www.lrp.usace.army.mil/or/navrpt.htm

Current River Conditions:
<http://www.lrp.usace.army.mil/current>

Permit and Regulatory Information:
www.lrp.usace.army.mil/or/or-f/permits.htm

GENERAL NOTES
NAVIGATION CHARTS
MONONGAHELA RIVER
U.S. ARMY ENGINEER DISTRICT, PITTSBURGH
Revised: 1 January 2004

REGULATIONS

PREScribed BY THE SECRETARY OF THE ARMY FOR THE OHIO AND MISSISSIPPI RIVERS, ABOVE CAIRO, IL, AND THEIR TRIBUTARIES; USE, ADMINISTRATION AND NAVIGATION

THE LAW

Section 7 of the River and harbor Act of August 8, 1917, provides as follows:

"That it shall be the duty of the Secretary of War to prescribe such regulations for the use, administration, and navigation of the navigable waters of the United States as in his judgment the public necessity may require for the protection of life and property, or of operations of the United States in channel improvement, covering all matters not specifically delegated by law to some other executive department. Such regulations shall be posted, in conspicuous and appropriate places, for the information of the public; and every person and every corporation which shall violate such regulations shall be deemed guilty of a misdemeanor and, on conviction thereof in any district court of the United States within those territorial jurisdiction such offense may have been committed, shall be punished by a fine not exceeding \$500, or by imprisonment (in the case of a natural person) not exceeding six months, in the discretion of the court."

In pursuance of the law above quoted, the following regulations were prescribed to govern the use, administration, and navigation of the Ohio River above Cairo, Ill., and its tributaries.

207.300 Ohio River, above Cairo, Ill., and their tributaries; use, administration, and navigation.

(a) Authority of Lockmasters. The lockmaster shall be charged with the immediate control and management of the lock, and of the area set aside as the lock area, including the lock approach channels. He shall see that all laws, rules, and regulations for the use of the lock and lock area are duly complied with, to which end he is authorized to give all necessary orders and directions in accordance therewith, both to employees of the Government and to any and every person within the limits of the lock or lock area, whether navigating the lock or not. No one shall cause any movement of any vessel, boat, or other floating thing in the lock or approaches except by or under the direction of the lockmaster or his assistant. In the event of an emergency, the lockmaster may

depart from these regulations as he deems necessary. The lockmasters shall also be charged with the control and management of Federally constructed mooring facilities.

(b) Safety Rules for Vessels Using Navigation Locks. The following safety rules are hereby prescribed for vessels in the locking process, including the act of approaching or departing a lock:

(1)Tows with Flammable or Hazardous Cargo Barges, Loaded or Empty.

(i) Stripping barges or transferring cargo is prohibited.

(ii) All hatches on barges used to transport flammable or hazardous materials shall be closed and latched, except those barges carrying a gas-free certificate.

(iii) Spark-proof protective rubbing fenders ("possums") shall be used.

(2) All Vessels.

(i) Leaking vessels may be excluded from locks until they have been repaired to the satisfaction of the lockmaster.

(ii) Smoking, open flames, and chipping or other spark-producing activities are prohibited on deck during the locking cycle.

(iii) Painting will not be permitted in the lock chamber during the locking cycle.

(iv) Tow speeds shall be reduced to a rate of travel such that the tow can be stopped by checking should mechanical difficulties develop. Pilots should check with the individual lockmasters concerning prevailing conditions. It is also recommended that pilots check their ability to reverse their energies prior to beginning an approach. Engines shall not be turned of in the lock until the tow has stopped and been made fast.

(v) U.S. Coast Guard Regulations require all vessels to have on board life saving devices for prevention of drowning. All crew members of vessels required to carry work vests (life jackets) shall wear them during a lockage, except those persons in an area enclosed with a handrail or other device which would reasonably preclude the possibility of falling overboard. All deckhands

handling lines during locking procedures shall wear a life jacket. Vessels not required by Coast Guard Regulations to have work vests aboard shall have at least the prescribed life saving devices, located for ready access and use if needed. The lockmaster may refuse lockage to any vessel which fails to conform to the above.

(c) Reporting of Navigation Incidents. In furtherance of increased safety on waterways the following safety rules are hereby prescribed for all navigation interests:

(1) Any incident resulting in uncontrolled barges shall immediately be reported to the nearest lock. The report shall include information as to the number of loose barges, their cargo, and the time and location where they broke loose. The lockmaster or locks shall be kept informed of the progress being made in bringing the barges under control so that he can initiate whatever actions may be warranted.

(2) Whenever barges are temporally moored at other than commercial terminals or established fleeting areas, and their breaking away could endanger a lock, the nearest lock shall be so notified, preferably the downstream lock.

(3) Sunken or sinking barges shall be reported to the nearest lock both downstream and upstream of the location in order that other traffic passing these points may be advised of the hazards.

(4) In the event of an oil spill, notify the nearest lock downstream, specifying the time and location of the incident, type of oil, amount of spill, and what recovery or controlling measures are being employed.

(5) Any other activity on the waterways that could conceivably endanger navigation or a navigation structure shall be reported to the nearest lock.

(6) Whenever it is necessary to report an incident involving uncontrolled, sunken or sinking barges, cargo in the barges shall be accurately identified.

(d) Precedence at Locks.

(1) The vessel arriving first at a lock shall normally be first to lock through, but precedence shall be given to vessels belonging to the United States. Licensed commercial passenger vessels

operating on a published schedule or regularly operating in the "for hire" trade shall have precedence over cargo tows and like craft.

Commercial cargo tows shall have precedence over recreational craft, except as described in paragraph (f).

(2) Arrival posts or markers may be established above and/or below the locks. Vessels arriving at or opposite such posts or markers will be considered as having arrived at the locks within the meaning of this paragraph. Precedence may be established visually or by radio communication. The lockmaster may prescribe such departure from the normal order of precedence as in his judgment is warranted to achieve best lock utilization.

(e) Unnecessary Delay at Locks. Masters and pilots must use every precaution to prevent unnecessary delay in entering or leaving locks. Vessels failing to enter locks with reasonable promptness when signaled to do so shall lose their turn. Rearranging or switching of barges in the locks or in approaches is prohibited unless approved or directed by the lockmaster. This is not meant to curtail "jackknifing" or set-overs where normally practiced.

(f) Lockage of Recreation Craft.

In order to fully utilize the capacity of the lock, the lockage of recreational craft shall be expedited by locking them through with commercial craft, provided that both parties agree to joint use of the chamber. When recreational craft are locked simultaneously with commercial tows, the lockmaster will direct, whenever practicable, that the recreational craft enter the lock and depart while the tow is secured in the lock. Recreational craft will not be locked through with vessels carrying volatile cargoes or other substances likely to emit toxic or explosive vapors. If the lockage of recreational craft can not be accomplished within the time required for three other lockages, a separate lockage of recreational craft shall be made. Recreational craft operators are advised that many locks have a pull chain located at each end of the lock which signals the lockmaster that lockage is desired.

(g) Simultaneous Lockage of Tows with Dangerous Cargoes. Simultaneous lockage of other rows with tows carrying dangerous cargoes or containing flammable vapors normally will only be permitted when there is agreement between the lockmaster and both vessel masters that the simultaneous lockage can be executed safely. He shall make a separate decision each time such action seems safe and appropriate, provided:

(1) The first vessel or tow in and the last vessel out are secured before the other enters or leaves.

(2) Any vessel or tow carrying dangerous cargoes is not leaking.

(3) All masters involved have agreed to the joint use of the lock chamber.

(h) Stations While Awaiting Lockage. Vessels awaiting their turn to lock shall remain sufficiently clear of the structure to allow unobstructed departure for the vessel leaving the lock. However, to the extent practicable under the prevailing conditions, vessels and tows shall position themselves so as to minimize approach time when signaled to do so.

(i) Stations While Awaiting Access Through Navigable Pass. When navigable dams are up or are in the process of being raised or lowered, vessels desiring to use the pass shall wait outside the limits of the approach points unless authorized otherwise by the lockmaster.

(j) Signals. Signals from vessels shall ordinarily be by whistle; signals from locks to vessels shall be by whistle, another sound devise, or visual means. When a whistle is used, long blasts of the whistle shall not exceed 10 seconds and short blasts of the whistle shall not exceed 3 seconds. Where a lock is not provided with a sound or visual signal installation, the lockmaster will indicate by voice or by the wave of a hand when the vessels may enter or leave the lock. Vessels must approach the locks with caution and shall not enter nor leave the lock until signaled to do so by the lockmaster.

The following lockage signals are prescribed:

(1) Sound Signals by Means of a Whistle. These signals apply at either a single lock or twin locks.

(i) Vessels desiring lockage shall on approaching a lock give the following signals at a distance of not more than one mile from the lock:

(a) If a single lockage only is required: One long blast of the whistle followed by one short blast.

(b) If a double lockage is required: One long blast of the whistle followed by two short blasts.

(ii) When the lock is ready for entrance, the lock will give the following signals:

(a) One long blast of the whistle indicates permission to enter the lock chamber in the case of a single lock or to enter the landward chamber in the case of twin locks.

(b) Two long blasts of the whistle indicates permission to enter the riverward chamber in the case of twin locks.

(iii) Permission to leave the locks will be indicated by the

following signals given by the lock:

(a) One short blast of the whistle indicates permission to leave the lock chamber in the case of a single lock or to leave the landward chamber in the case of twin locks.

(b) Two short blasts of the whistle indicates permission to leave the riverward chamber in the case of twin locks.

(iv) Four or more short blasts of the lock whistle delivered in rapid succession will be used as a means of attracting attention, it indicate caution, and to signal danger. This signal will be used to attract the attention of the captain and crews of vessels using or approaching the lock or navigating in its vicinity and to indicate that something unusual involving or requiring special caution is happening or is about to take place. When this signal is given by the lock, the captains and crews of vessels in the vicinity shall immediately become on the alert to determine the reason for the signal and shall take the necessary steps to cope with the situation.

(2) Lock Signal Lights. At locks where density of traffic or other local conditions make it advisable, the sound signals from the lock will be supplemented by signal lights. Flashing lights (showing a one-second flash followed by a two-second eclipse) will be located on or near each end of the land wall to control use of a single lock or of the landward lock of double locks. In addition, at double locks, interrupted flashing lights (showing a one-second flash, a one-second eclipse, followed by a three-second eclipse) will be located on or near each end of the intermediate wall to control use of the riverward lock. Navigation will be governed as follows:

Red Light. Locks cannot be made ready immediately. Vessel shall stand clear.

Amber Light. Lock is being made ready. Vessel may approach but under full control.

Green Light. Lock is ready for entrance.

Green and Amber. Lock is ready for entrance but gates cannot be recessed completely. Vessel may enter under full control and with extreme caution.

(3) Radio Communications. VHF-FM radios, operating on the FCC authorized Maritime Band, have been installed at all operational locks. Radio contact may be made by any vessel desiring passage. Commercial tows are especially requested to make contact at least one half hour before arrival in order that the pilot may be informed of current river and traffic conditions that may affect the safe passage of this tow.

All locks monitor 156.8 MHz (Ch. 16) and 156.65 MHz (Ch. 13) and can work 156.65 MHz (Ch.13) and 156.7 MHz (Ch. 14) Ch. 16 is the authorized call, reply and distress frequency, and locks are not permitted to work on this frequency except in an emergency involving the risk of immediate loss of life or property. Vessels may call and work Ch. 13, without switching, but are cautioned that vessel to lock traffic must not interrupt or delay Bridge to Bridge traffic which has priority at all times.

(k) Rafts. Rafts to be locked through shall be moored in such manner as not to obstruct the entrance of the lock and if to be locked in sections, shall be brought to the lock as directed by the lockmaster. After passing the lock the sections shall be reassembled at such distance beyond the lock as not to interfere with other vessels.

(l) Entrance to and Exit from Locks. In case two or more boats or tows are to enter for the same lockage, their order of entry shall be determined by the lockmaster. Except as directed by the lockmaster, no boat shall pass another in the lock. In no case will boats be permitted to enter or leave the locks until directed to do so by the lockmaster. The sides of all craft passing through any lock shall be free from projections of any kind which might injure the lock walls. All vessels shall be provided with suitable fenders, and shall be used to protect the lock and guide walls until it has cleared the lock and guide walls.

(m) Mooring.

(1) At Locks.

(i) All vessels when in the locks shall be moored as directed by the lockmaster. Vessels shall be moored with bow and stern lines leading in opposite directions to prevent the vessels from "running" in the lock. All vessels will have one additional line available on the head of the tow for emergency use. The pilothouse shall be attended by qualified personnel during the entire locking procedure. When the vessel is securely moored, the pilot shall not cause movement of the propellers except in emergency or unless directed by the lockmaster. Tying to lock ladders is strictly prohibited.

(ii) Mooring of unattended or nonpropelled vessels or small craft at the upper or lower channel approaches will not be permitted within 1200 feet of the lock.

(2) Outside of Locks.

(i) No vessel or other craft shall regularly or permanently moor in any reach of a navigation channel. The approximate centerline

of such channels are as marked as the sailing line on the Corps of Engineers' navigation charts. Nor shall any floating craft, except in an emergency, moor in any narrow or hazardous section of the waterway. Furthermore, all vessels or other craft are prohibited from regularly or permanently mooring in any section of navigable waterways which are congested with commercial facilities or traffic unless it is moored at facilities approved by the Secretary of the Army or his authorized representative. The limit of congested areas shall be marked on Corps of Engineers' navigation charts. However, the District Engineer may authorize in writing exceptions to any of the above if, in his judgment, such mooring would not adversely affect navigation and anchorage.

(ii) No vessel or other craft shall be moored to railroad tracks, to riverbanks in the vicinity of railroad tracks when such mooring threatens the safety of equipment using tracks, to telephone poles or power poles, or to bridges or similar structures used by the public.

(iii) Except in case of great emergency, no vessel or craft shall anchor over revetted banks of the river, and no floating plant other than launches and similar small craft shall land against banks protected by revetment except a regular commercial landings. In all cases, every precaution to avoid damage to the revetment works shall be exercised. The construction of log rafts along matted or paved banks or the tying up and landing of log rafts against such banks shall be performed in such a manner as to cause no damage to the mattress work or bank paving. Generally, mattress work extends out into the river 600 feet from the low water line.

(iv) Any vessel utilizing a federally constructed mooring facility (e.g., cells, buoys, anchor rings) at the point designated on the current issue of the Corps' navigation charts shall advise the lockmaster at the nearest lock that from point by the most expeditious means.

(n) Draft of Vessels. No vessel shall attempt to enter a lock unless its draft is at least three inches less than the least depth of water over the guard sills, or over the gate sill if there be no guard sills. Information concerning controlling depth over sills can be obtained from the lockmaster at each lock or by inquiry at the office of the district engineer of the district in which the lock is located.

(o) Handling Machinery. No one but employees of the United

States shall move any lock machinery except as directed by the lockmaster. Tampering or meddling with the machinery or other parts of the lock is strictly forbidden.

(p) Refuse in Locks. Placing or discharging refuse of any description into the lock, on lock walls or esplanade, canal or canal bank is prohibited.

(q) Damage to Locks or Other Work. To avoid damage to plant and structures connected with the construction or repair of locks and dams, vessels passing structures in the process of construction or repair shall reduce their speed and navigate with special caution while in the vicinity of such work. The restrictions and admonitions contained in these regulations shall not affect the liability of the owners and operators of floating craft for any damage to locks or other structures caused by the operation of such craft.

(r) Trespass on Lock Property. Trespass on locks or dams or other United States property pertaining to the locks or dams is strictly prohibited except in those areas specifically permitted. Parties committing any injury to the locks or dams or to any part thereof will be responsible therefore. Any person committing a willful injury to any United States property will be prosecuted. No fishing will be permitted from lock walls, guide walls, or guard walls of any lock or from any dam except in areas designated and posted by the responsible District Engineer as fishing areas. Personnel from commercial and recreational craft will be allowed on the lock structure for legitimate business reasons: e.g., crew changes, emergency phone calls, etc.

(s) Restricted Areas at Locks and Dams. All waters immediately above and below each dam, as posted by the respective District Engineers, are hereby designated as restricted areas. No vessel or other floating craft shall enter any such restricted area at any time. The limits of the restricted areas at each dam will be determined by the responsible District Engineer and marked by signs and/or red flashing lights installed in conspicuous and appropriate places.

(t) Statistical Information.

(1) Masters of vessels shall furnish to the lockmaster such statistics of passengers or cargo as may be requested.

(2) The owners or masters of vessels sunk in the navigable waters of the United States shall provide the appropriate District Engineer with a copy of the sunken vessel report furnished to the

U.S. Coast Guard Marine Inspection Office in accordance with Code of Federal Regulations Title 33 Subpart 64.10-1.

(u) Operations during High Water and Floods in Designated Vulnerable Areas. Vessels operating on these waters during periods when river stages exceed the level of "ordinary high water", as designated on Corps of Engineers' navigation charts, shall exercise reasonable care to minimize the effect of their bow waves and propeller washes on river banks; submerged structures or habitations; terrestrial growth such as trees and bushes; and manmade amenities that may be present. Vessels shall operate carefully when passing close to levees and other flood protection works, and shall observe minimum distance from banks which may be prescribe from time to time in Notices to Navigation Interests. Pilots should exercise particular care not to direct propeller wash at river banks, levees, revetments, structures or other appurtenances subject to damage from wave action.

(v) Navigation Lights for Use at All Locks and Dams.

(1) At locks at all fixed dams and at locks at all movable dams when the dams are up so that there is no navigable pass through the dam, the following navigation lights will be displayed during hours of darkness.

(a) Three green lights visible through an arc of 360° arranged in a vertical line on the upstream end of the river (guard) wall unless the intermediate wall extends farther upstream. In the latter case, the lights will be placed on the upstream end of the intermediate wall.

(b) Two green lights visible through an arc of 360° arranged in a vertical line on the downstream end of the river (guard) wall unless the intermediate wall extends farther downstream. In the latter case, the lights will be placed on the downstream end of the intermediate wall.

(c) A single red light, visible through an arc of 360° on each end (upstream and downstream) of the land (guide) wall.

(2) At movable dams when the dam has been lowered or partly lowered so that there is an unobstructed navigable pass through the dam, the navigation lights indicated in the following paragraphs will be displayed during hours of darkness until lock walls and weir piers are awash.

(a) Three red lights visible through an arc of 360° arranged in a vertical line on the upstream end of the river (guard) wall.

(b) Two red lights visible through an arc of 360° arranged in a vertical line on the downstream end of the river (guard) wall.

(c) A single red light visible through an arc of 360° on each end (upstream and downstream) of the land (guide) wall.

(3) After lock walls and weir piers are awash they will be marked as prescribed in paragraph (x) below.

(4) If one or more bear traps or weirs are open or partially open, and may cause a set in current conditions at the upper approach to the locks, this fact will be indicated by displaying a white circular disk 5 feet in diameter, on or near the light support on the upstream end of the land (guide) wall during the hours of daylight, and will be indicated during hours of darkness by displaying a white (amber) light vertically under and 5 feet below the red light on the upstream end of the land (guide) wall.

(x) Buoys at Moveable Dams.

(1) Whenever the river (guard) wall of the lock and any portion of the dam are awash, and until covered by a depth of water equal to the project depth, the limits of the navigable pass through the dam will be marked by buoys located at the upstream and downstream ends of the river (guard) wall, and by a single buoy over the end or ends of the portion or portions of the dam adjacent to the navigable pass over which project depth is not available. A red nun-type buoy will be used for such structures located on the left-hand side (facing downstream) of the river and a green can-type buoy for such structures located on the right-hand side. Buoys will be lighted, if practicable.

(2) Where powerhouses or other substantial structures projecting considerably above the level of the lock wall are located on the river (guard) wall, a single red light located on top of one of these structures may be used instead of river wall buoys prescribed above until these structures are awash, after which they will be marked by a buoy of appropriate type and color (red nun or green can buoy) until covered by a depth of water equal to the project depth. Buoys will be lighted, if practicable.

(y) Vessels to Carry Regulations. A copy of these regulations shall be kept at all times on board each vessel regularly engaged in navigating the rivers to which these regulations apply. Copies may be obtained from any lock office or District Engineer's office on request. Masters of such vessels are encouraged to have on board copies of the current edition of appropriate navigation charts.

NOTE: These regulations are those in effect 31 July 1975.

EXTRACT FROM SECTIONS 15 AND 16 OF THE RIVER AND HARBOR ACT OF 1899

SECTION 15. That it shall not be lawful to tie up or anchor vessels or other craft in navigable channels in such a manner as to prevent or obstruct the passage of other vessels or other craft; or to sink, or permit or cause to be sunk, vessels or craft in navigable channels; or to float loose timber and logs, or to float what is known as sack rafts of timber and logs in streams or channels actually navigated by steamboats in such manner as to obstruct, impede, or endanger navigation. And whenever a vessel, raft, or other craft is wrecked and sunk in a navigable channel, it shall be the duty of the owner, lessee, or operator of such sunken craft to immediately mark it with a buoy or beacon during the day and a lighted lantern at night, and to maintain such marks until the sunken craft is removed or abandoned, and the neglect or failure of the said owner, lessee, or operator so to do shall be unlawful; and it shall be the duty of the owner, lessee, or operator of such sunken craft to commence the immediate removal of the same, and prosecute such removal diligently and failure to do so shall be considered as an abandonment of such craft, and subject the same to removal by the United States as hereinafter provided for (30 Stat. 1152; 33 U.S.C. § 409).

SECTION 16. That every person and every corporation that shall violate, or that shall knowingly aid, abet, authorize, or instigate a violation of the provisions of sections thirteen, fourteen, and fifteen of this Act shall be guilty of a misdemeanor, and on conviction thereof shall be punished by a fine not exceeding twenty-five hundred dollars nor less than five hundred dollars, or by imprisonment (in the case of a natural person) for not less than thirty days nor more than one year, or by both such fine and imprisonment, in the discretion of the court, one-half of said fine to be paid to the person or persons giving information which shall lead to conviction (30 Stat. 1153; 33 U.S.C §411). And any and every master, pilot, and engineer, or person or persons acting in such capacity, respectively, on board of any boat or vessel who shall knowingly engage in towing any scow, boat, or vessel loaded with any material specified in section thirteen of this Act to any point or place or deposit or discharge in any harbor or navigable water, elsewhere than within the limits defined and permitted by the Secretary of War, or who shall willfully injure or destroy any work of the United States contemplated in section fourteen of this Act, or who willfully obstruct the channel of any waterway in the manner contemplated in section fifteen of this Act, shall be deemed guilty of a violation of this Act, and shall upon conviction be punished hereinbefore provided in this section, and shall also have his license revoked or suspended for a term to be fixed by the judge before whom tried and convicted. And any boat, vessel, scow, raft, or other craft used or employed in violating any of the provisions of sections thirteen, fourteen, and fifteen of this Act shall be liable for the pecuniary penalties specified in this section, and in addition thereto for the amount of the damages done by said boat, vessel, scow, raft, or other craft, which latter sum of the harbor or waterway in which the damage occurred, and said boat, vessel, scow, raft, or other craft may be proceeded against summarily by way of libel in any district court of the United States having jurisdiction thereof (30 Stat. 1153; 33 U.S.C § 412).

EXTRACT FROM SECTIONS 19 AND 20 OF THE RIVER AND HARBOR ACT OF 1899

SECTION 19. (a) That whenever the navigation of any river, lake, harbor, sound, bay, canal, or other navigable waters of the United States shall be obstructed or endangered by any sunken vessel, boat, watercraft, raft, or other similar obstruction, and such obstruction has existed for a longer period than thirty days, or whenever the abandonment of such obstruction can be legally established in a less space of time, the sunken vessel, boat, watercraft, raft, or other obstruction shall be subject to be broken up, removed, sold or otherwise disposed of by the Secretary of War at his discretion, without liability for any damage to the owners of the same; PROVIDED, that in his discretion, the Secretary of War may cause reasonable notice of such obstruction of not less than thirty days, unless the legal abandonment of the obstruction can be established in a less time, to be given by publication, addressed "To whom it may concern", in a newspaper published nearest to the locality of the obstruction, requiring the removal thereof; AND PROVIDED ALSO, that the Secretary of War may, in his discretion, at or after the time of giving such notice, cause sealed proposals to be solicited by public advertisement, giving reasonable notice of less than ten days, for the removal of such obstructions as soon as possible after the expiration of the above specified thirty days' notice, in case it has not in the meantime been so removed, these proposals and contracts, at his discretion, to be conditioned that such vessel, boat, watercraft, raft, or other obstruction, and all cargo and property contained therein, shall become the property of the contractor, and the contract shall be awarded to the bidder making the proposition most advantageous to the United States; PROVIDED, that such bidder shall give satisfactory security to execute the work; PROVIDED FURTHER, that any money received from the sale of any such wreck, or from any contractor for the removal of wrecks, under this paragraph shall be covered into the Treasury of the United States (30 Stat. 1154; 33 U.S.C. § 414).

(b) The owner, lessee, or operator of such vessel, boat, watercraft, raft, or other obstruction as described in this section shall be liable to the United States for the cost of removal or destruction and disposal as described which exceeds the costs recovered under subsection (a). Any amount recovered from the owner, lessee, or operator lessee, or operator of such vessel pursuant to this sub section to recover costs in excess of the proceeds from the sale or disposition of such vessel shall be deposited in the general fund of the Treasury of The United States.

SECTION 20. (a) That under emergency, in the case of any vessel, boat, watercraft, raft, or other similar obstruction, sinking or grounding, or being unnecessarily delayed in any Government canal or lock, or in any navigable waters mentioned in section nineteen, in such manner as to stop, seriously interfere with, or specially endanger navigation, in the opinion of the Secretary of War, or any agent of the United States to whom the Secretary may delegate proper authority, the Secretary of War or any such agent shall have the right to take immediate possession of such boat, vessel, or other watercraft, or raft, so far as to remove or to destroy it and to clear immediately the canal, lock, or navigable waters aforesaid of the obstruction thereby caused, using his best judgment to prevent any unnecessary injury; and no one shall interfere with or prevent such removal or destruction; PROVIDED, that the officer or agent charged with the removal or destruction of an obstruction under this section may in his discretion give notice in writing to the owners of any such obstruction requiring them to remove it; AND PROVIDE FURTHER, that the expense of removing any such obstruction as aforesaid shall be a charge against such craft and cargo; and if the owners thereof fail or refuse to reimburse the United States for such expense within thirty days after notification, then the officer or agent aforesaid may sell the craft or cargo, or any part thereof that may not have been destroyed in removal, and the proceeds of such sale shall be covered into the Treasury of the United States (30 Stat. 1154; 33 U.S.C. 415)

(b). The owner, lessee, or operator of such vessel, boat, watercraft, raft, or other obstruction as described in this section shall be liable to the United States for the cost of removal or destruction and disposal as described which exceeds the costs recovered under subsection (a). Any amount recovered from the owner, lessee, or operator of such vessel pursuant to this subsection to recover costs in excess of the proceeds from the sale or disposition of such vessel shall be deposited in the general fund of the Treasury of the United States.

JURISDICTIONAL LIMITS, ADDRESSES, AND TELEPHONE NUMBERS OF COAST GUARD OFFICIALS

The following information in the guidance and assistance of those persons required by law to, or who otherwise desire to contact, cognizant Coast Guard official.

U.S. COAST GUARD INFORMATION: Coast Guard units listed herein are under the operational and administrative control of:

Commanding Officer, Marine Safety Office 1430 Olive Street St. Louis, MO 63103	Rescue Coordination Center Aids to Navigation Branch Merchant Marine Safety Division	(314)425-4614 (314)425-4604 (314)425-4655	
Commanding Office, Marine Safety Office U.S. Coast Guard Suite 700 Kossman Bldg., Forbes Ave. & Stanwix St. Pittsburgh, PA 15222-4186		(412)644-5808	All Monongahela and Allegheny Rivers Ohio River to Mile 121.6 Youghiogheny River, 0 to Mile 3.0
Commanding Officer, Marine Safety Office U.S. Coast Guard P.O. Box 2412 Huntington, WV 27725		(304)529-5524	Mile 121.6 to 374.8
Commanding Officer, Marine Safety Office U.S. Coast Guard 4335 River Rd. Cincinnati, OH 45204		(513)684-3295	Mile 374.8 to 546.8
Commanding Officer, Marine Safety Office U.S. Coast Guard P.O. Box 1153, Room 360 Louisville, KY 40201		(502)582-5194 or 582-5195	Mile 546.4 to 867.3
Commanding Officer, Marine Safety Office U.S. Coast Guard P.O. Box 7509 Paducah, KY 42002-7509		(502)442-1621	Mile 867.3 to 981.0
After working hours and non-work days, marine accidents and deficiencies in aids to navigation may be reported to the following:			
Coast Guard Group Ohio Valley U.S. Customs - Court House Snyder Building 601 West Broadway Street Louisville, KY 40202-2229		(502)582-6474	

CHARACTERISTICS OF LIGHTS

Left Descending Bank	
F. W.	Fixed White
F. R.	Fixed Red
2 F. R.	Two Fixed Red
FL (2) W5s	Group Flashing White every 5 Sec. (2 flashes)
FL (2) W6s	Group Flashing White every 6 sec. (2 flashes)
FL (2) R5s	Group Flashing Red every 5 sec. (2 flashes)
FL (2) R6s	Group Flashing Red every 6 sec. (2 flashes)
Iso W 2s	Equal Interval White 2 sec.
Iso R 2s	Equal Interval Red 2 sec.
Q R	Quick Flashing Red
IQ R	Interrupted Quick Flashing Red
Right Descending Bank	
F. W.	Fixed White
F. G.	Fixed Green
2 F. G.	Two Fixed Green
FL W4s	Flashing White every 4 Sec.
FL G4s	Flashing Green every 4 sec.
Iso W 2s	Equal Interval White 2 sec.
Iso G 2s	Equal Interval Green 2 sec.
Q G	Quick Flashing Green
IQ G	Interrupted Quick Flashing Green

CHARACTERISTICS OF BEACONS

All beacons have reflective material which matches the color indicated below:	
SG	Square shaped Green PASSING beacon.
CG	Diamond shaped Green CROSSING beacon.
TR	Triangle shaped Red PASSING beacon.
JR	Triangle shaped Red and Green JUNCTION beacon.

POSITION OF AIDS TO NAVIGATION

Buoys are set to mark project depths taking into consideration the prevailing river stage and obstructions. Buoy positions as shown on the obstructions. Buoy position as shown on the chart are approximate and should always be given as wide a berth in passing as possible consistent with the length and width of the bend or crossing.

Buoys should always be used with caution. They may be carried off position by high water accumulation of drift, ice, or sunk by collision or other causes. When carried off position destroyed, or removed to prevent loss, buoys are replaced at the earliest opportunity.

LIGHTS AND BEACONS ARE ALSO SHOWN IN APPROXIMATE LOCATIONS.

NOTE

NAVIGATIONAL SYMBOLS AS SHOWN IN THE LEGEND ARE ONLY REPRESENTATIVE. THE ACTUAL LOCATION OF THE ITEMS WHICH THEY REPRESENT MAY VARY FROM WHAT IS SHOWN ON THE NAVIGATION CHART.

MARINE RADIO CHANNELS

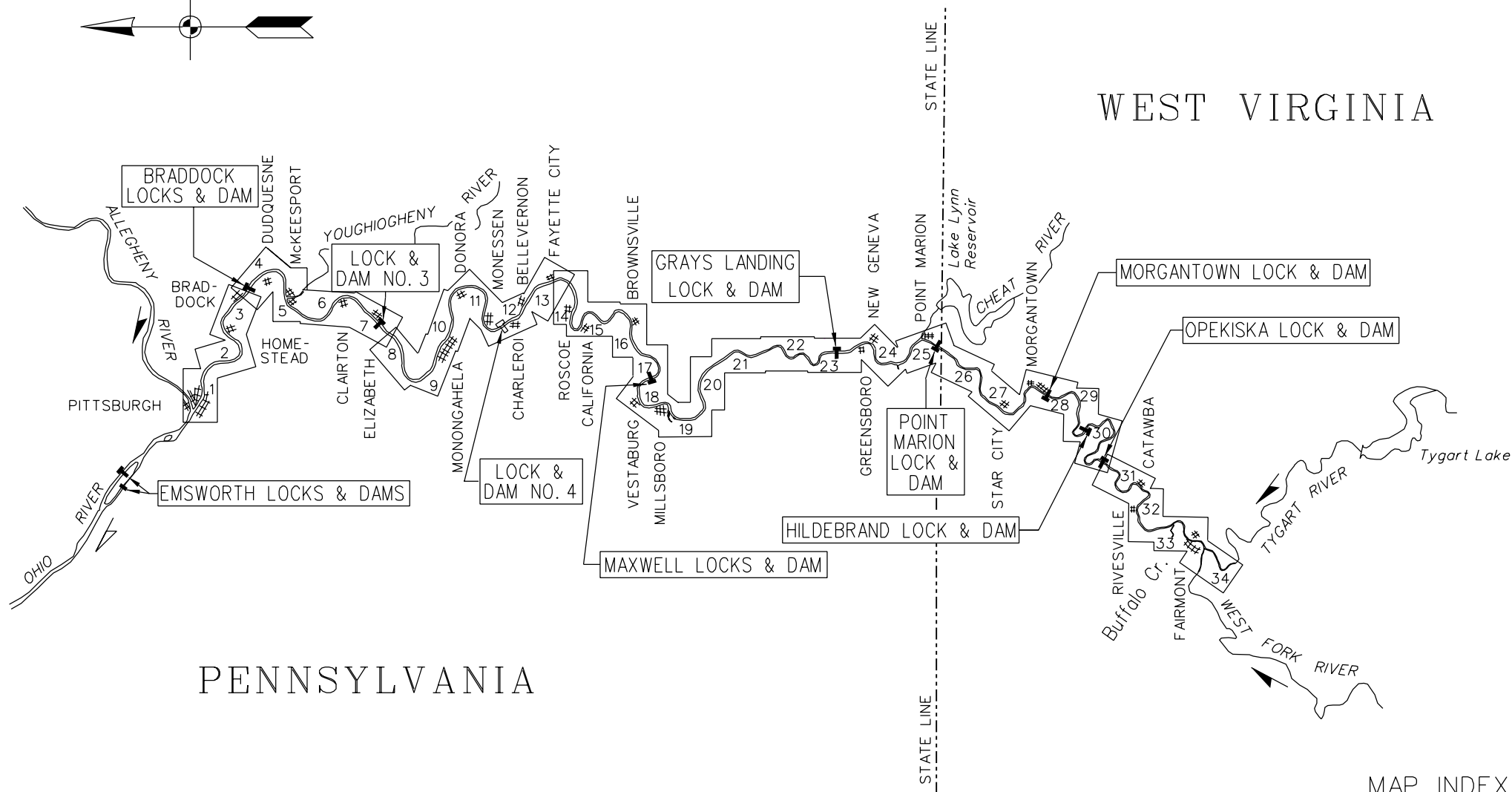
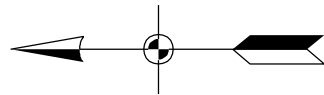
CHANNEL	FREQUENCY	PURPOSE
13	156.650mhz	Bridge to Bridge
14	156.700mhz	Port Operations
16	156.800mhz	Hailing & Distress

- NOTES:
- 1. Locks monitor Channels 13 & 16.
 - 2. Coast Guard monitors Channel 16 for Distress Calls.

CHARACTERISTICS OF LIGHTS AND NOTES
NAVIGATION CHARTS

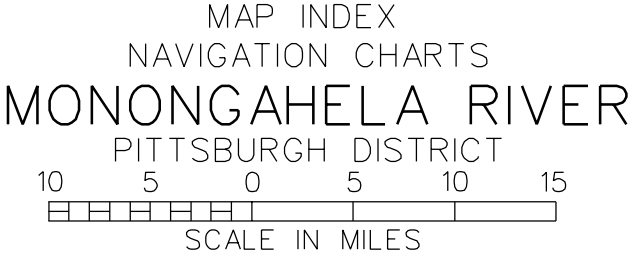
MONONGAHELA RIVER
U.S. ARMY ENGINEER DISTRICT, PITTSBURGH
Revised: 1 January 2000

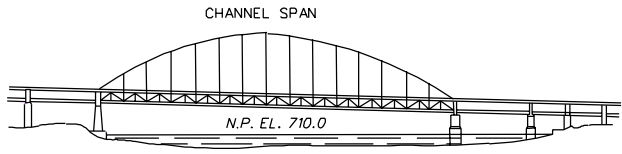
Chart Nos.	Locality	Chart Nos.	Locality
	EMSWORTH LOCKS & DAMS (Project Pool El. 710.0)		GRAYS LANDING LOCK & DAM (Mile 82.0, Project Pool El. 778.0)
1	Pittsburgh	23	Grays Landing Lock & Dam (Phone 724-583-8304)
3	Homestead, Braddock, Rankin	24	Greensboro, Dunkard Creek
	BRADDOCK LOCKS & DAM (Mile 11.2, Project Pool El. 718.7)	25	Cheat River, Point Marion
4	Braddock Locks & Dam 2 (Phone 412-271-1272), Turtle Creek, Duquesne		POINT MARION LOCK & DAM (Mile 90.8, Project Pool El. 797.0)
5	McKeesport, Youghiogheny River	25	Point Marion Lock & Dam (Phone 724-725-5289)
6	Clairton, Peters Creek	27	Star City
	LOCKS & DAM 3 (Mile 23.8, Project Pool El. 726.9)	28	Deckers Creek, Morgantown
7	Locks & Dam 3 (Phone 412-384-4532), Elizabeth,		MORGANTOWN LOCK & DAM (Mile 102.0, Project Pool El. 814.0)
9	Monongahela	28	Morgantown Lock & Dam (Phone 304-292-1885), Morgantown
11	Donora		HILDEBRAND LOCK & DAM (Mile 108.0, Project Pool El. 835.0)
	LOCKS & DAM 4 (Mile 41.5, Project Pool El. 743.5)	29	Hildebrand Lock & Dam (Phone 304-983-2300)
12	Locks & Dam 4 (Phone 724-684-8442), Monessen, Charleroi		OPEKISKA LOCK & DAM (Mile 115.4, Project Pool El. 857.0)
13	Belle Vernon, Fayette City		Opekiska Lock & Dam (Phone 304-366-4224)
15	California	30	Prickett Creek Small Boat Launching Area, Mile 120.7
16	Brownsville	32	Buffalo Creek, Fairmont
	MAXWELL LOCKS & DAM (Mile 61.2, Project Pool El. 763.0)	33	Tygart Valley River, West Fork River, End of Navigation.
17	Maxwell Locks & Dam (Phone 724-785-5027)	34	
18	Fredericktown,		
19	Tenmile Creek		



PENNSYLVANIA

WEST VIRGINIA

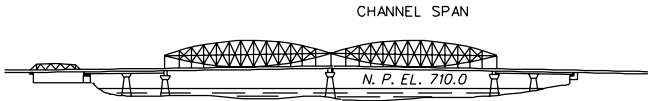




4

FORT PITT HIGHWAY BRIDGE
CHANNEL SPAN
MILE 0.22

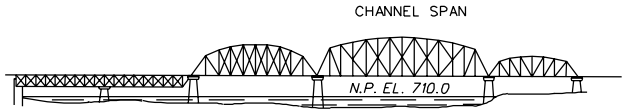
ELEVATION OF LOW STEEL 757.1 *
 VERTICAL CLEARANCE AT POOL STAGE 47.1' *
 HORIZONTAL CLEARANCE 640.0'
 * AT RIGHT PIER



5

SMITHFIELD STREET HIGHWAY BRIDGE
CHANNEL SPAN
MILE 0.77

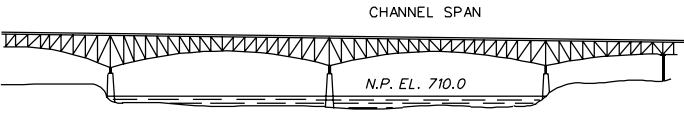
ELEVATION OF LOW STEEL 752.5 *
 VERTICAL CLEARANCE AT POOL STAGE 42.5' *
 HORIZONTAL CLEARANCE 344.0'
 * AT MIDDLE OF SPAN



6

PORT AUTHORITY TRANSIT BRIDGE
CHANNEL SPAN
MILE 1.01

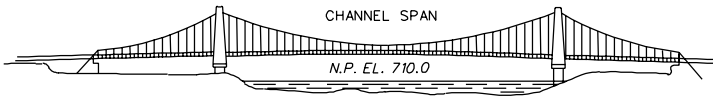
ELEVATION OF LOW STEEL 753.9
 VERTICAL CLEARANCE AT POOL STAGE 43.9'
 HORIZONTAL CLEARANCE 351.0'



7

LIBERTY HIGHWAY BRIDGE
CHANNEL SPAN
MILE 1.09

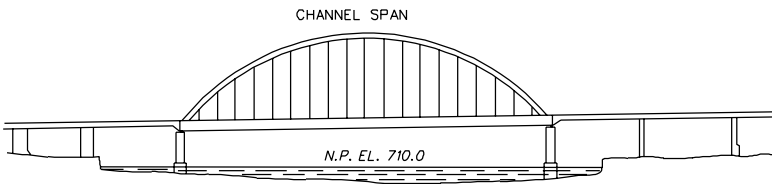
ELEVATION OF LOW STEEL 754.4 *
 VERTICAL CLEARANCE AT POOL STAGE 44.4' *
 HORIZONTAL CLEARANCE 448.0'
 * AT SPRING LINE



8

SOUTH TENTH STREET HIGHWAY BRIDGE
CHANNEL SPAN
MILE 1.48

ELEVATION OF LOW STEEL 760.3
 VERTICAL CLEARANCE AT POOL STAGE 50.3'
 HORIZONTAL CLEARANCE 705.7'

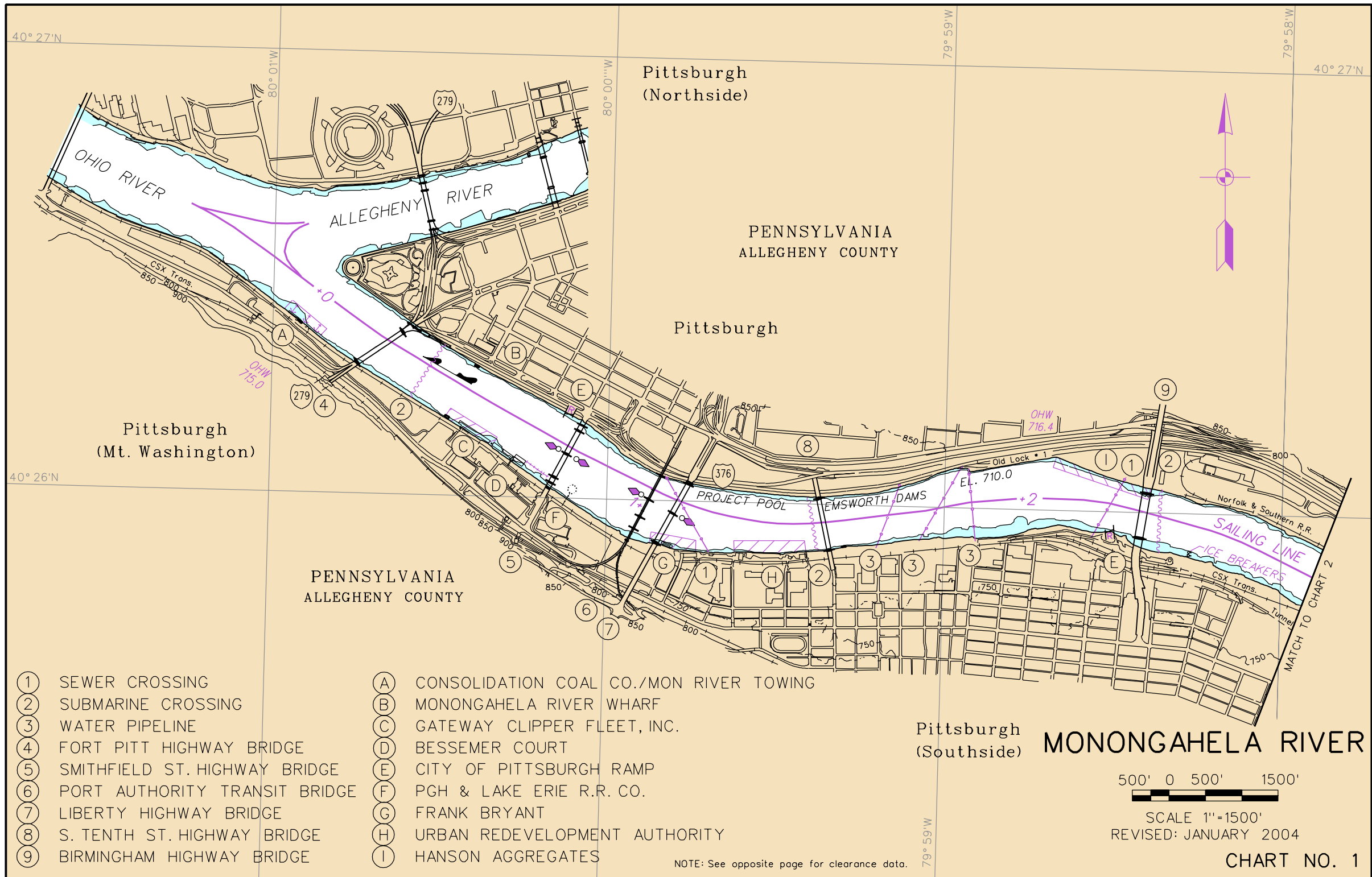


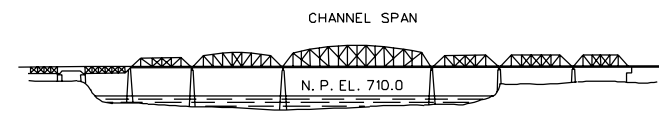
9

BIRMINGHAM HIGHWAY BRIDGE
CHANNEL SPAN
MILE 2.32

ELEVATION OF LOW STEEL 774.8
 VERTICAL CLEARANCE AT POOL STAGE 64.8'
 HORIZONTAL CLEARANCE 607.0'



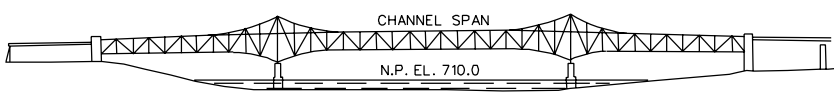




4

HOT METAL HIGHWAY BRIDGE
CHANNEL SPAN
MILE 3.09

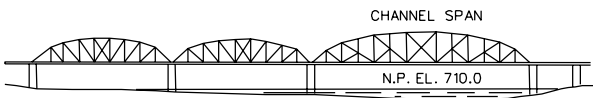
ELEVATION OF LOW STEEL 758.4
VERTICAL CLEARANCE AT POOL STAGE 48.4'
HORIZONTAL CLEARANCE 311.0'



5

GLENWOOD HIGHWAY BRIDGE
CHANNEL SPAN
MILE 5.93

ELEVATION OF LOW STEEL 760.0*
VERTICAL CLEARANCE AT POOL STAGE 50.0*
HORIZONTAL CLEARANCE 557.0'
* AT MIDDLE OF SPAN



6

CSX TRANS. RAILROAD BRIDGE
CHANNEL SPAN
MILE 6.14

ELEVATION OF LOW STEEL 760.5*
VERTICAL CLEARANCE AT POOL STAGE 50.5*
HORIZONTAL CLEARANCE 453.0'
* AT MIDDLE OF SPAN

AERIAL POWER CROSSINGS

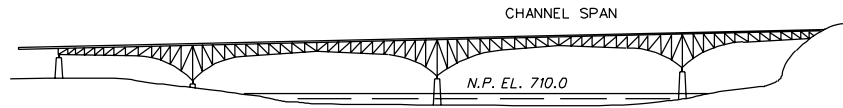
CROSSING	MILE	ELEVATION	CLEARANCE
1	4.6	809.7	99.7'
1	4.7	857.1	147.1'



ELEVATIONS LOOKING DOWNSTREAM
MONONGAHELA RIVER CHART 2

- (A) LTV STEEL CO.
- (B) PA. AMERICAN WATER CO.
- (C) CAMPBELL BARGE LINE INC.
- (D) CSX RAILROAD CO.
- (E) SANDCASTLE
- (F) CSX REALTY CO. (INACTIVE)





4

HOMESTEAD GRAYS HIGHWAY BRIDGE

CHANNEL SPAN

MILE 7.25

ELEVATION OF LOW STEEL 761.2 *
 VERTICAL CLEARANCE AT POOL STAGE 51.2' *
 HORIZONTAL CLEARANCE 516.3'
 * AT SPRING LINE. 109.3' CLEAR. AT CL



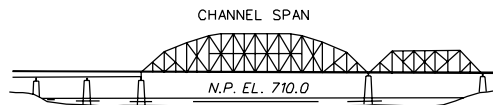
5

CSX TRANS. (HOT METAL) RAILROAD BRIDGE

CHANNEL SPAN

MILE 8.53

ELEVATION OF LOW STEEL 761.6 *
 VERTICAL CLEARANCE AT POOL STAGE 51.6' *
 HORIZONTAL CLEARANCE 250.0'
 * AT MIDDLE OF SPAN



6

UNION RAILROAD BRIDGE

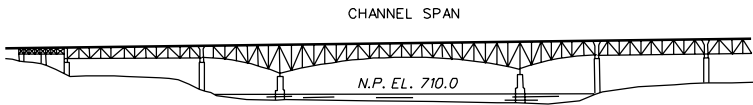
CHANNEL SPAN

MILE 9.25

ELEVATION OF LOW STEEL 760.8 *
 VERTICAL CLEARANCE AT POOL STAGE 50.8' *
 HORIZONTAL CLEARANCE 483.0'
 * AT MIDDLE OF SPAN

AERIAL POWER CROSSINGS

CROSSING	MILE	ELEVATION	CLEARANCE
1	9.6	794.7	84.7'
1	9.61	784.0	74.0'



7

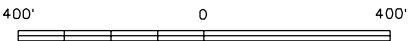
RANKIN HIGHWAY BRIDGE

CHANNEL SPAN

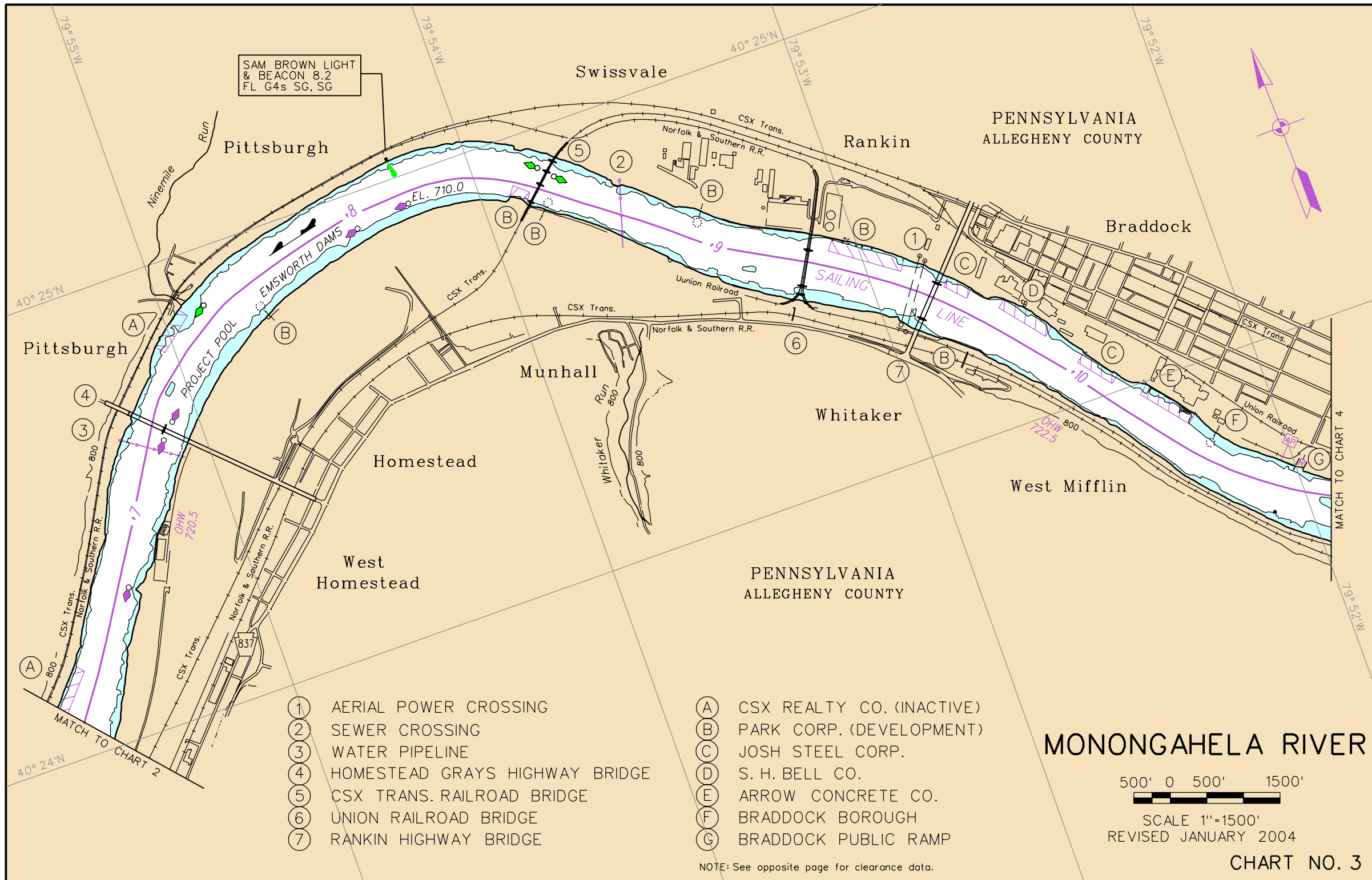
MILE 9.58

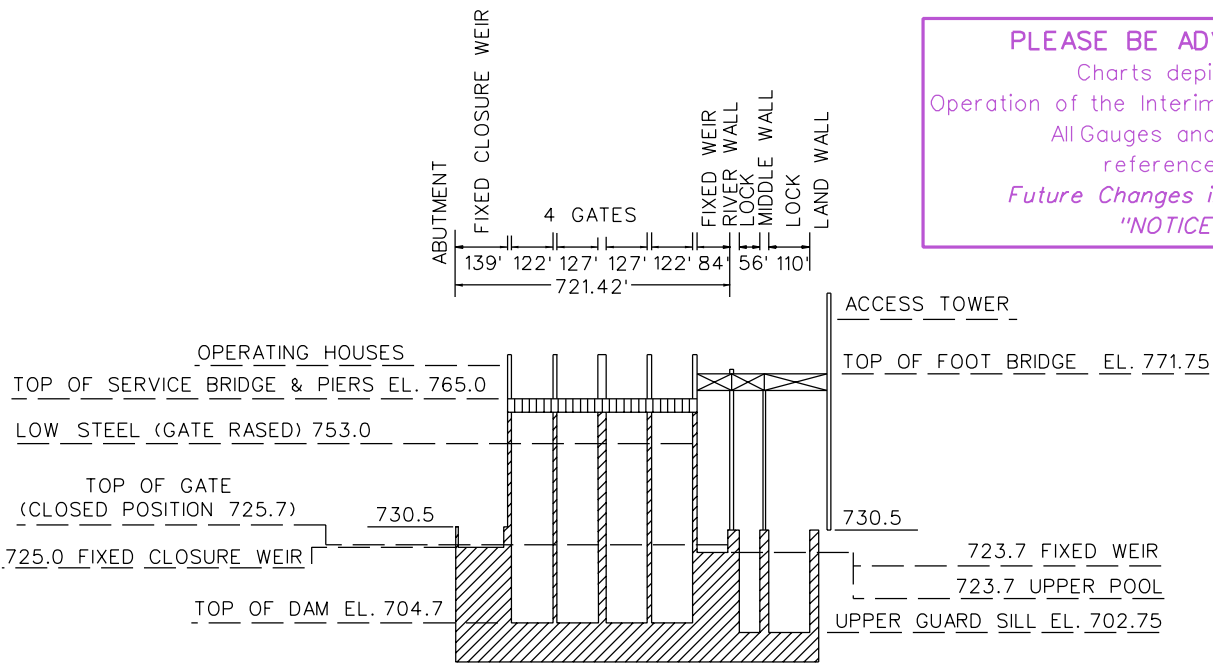
ELEVATION OF LOW STEEL 755.0 *
 VERTICAL CLEARANCE AT POOL STAGE 45.0' *
 HORIZONTAL CLEARANCE 505.25'
 * AT LEFT. 75' CLEAR AT CL

BRIDGE SCALE



ELEVATIONS LOOKING DOWNSTREAM
 MONONGAHELA RIVER CHART 3





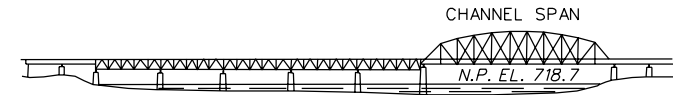
BRADDOCK LOCKS & DAM
 NAVIGATION SUSPENDED - UPPER GAGE 19.0
 TELEPHONE NO. 412-271-1272

BRADDOCK LOCKS & DAM	
UPPER POOL EL.	721.8
LOWER POOL EL.	710.0
UPPER GAGE	
ZERO EL.	709.7
N.P. READS	9.0'
LOWER GAGE	
ZERO EL.	694.2
N.P. READS	15.8'

PLEASE BE ADVISED FOR BRADDOCK POOL ONLY
 Charts depict current (2004) Pool El. of 718.7
 Operation of the Interim Pool Elevation may fluctuate up to El. 721.8
 All Gauges and Vertical Bridge Clearances are still
 referenced from Normal Project Pool El. 718.7
*Future Changes in Project Pool Elevation will be published in
 "NOTICES TO NAVIGATION INTERESTS"*

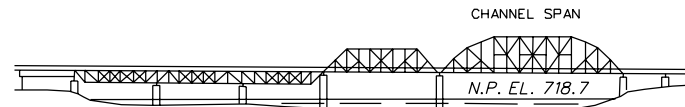
AERIAL POWER CROSSINGS

CROSSING	MILE	ELEVATION	CLEARANCE
1	11.3	838.7	120.0'
1	11.4	853.0	134.3'
1	12.3	801.2	82.5'



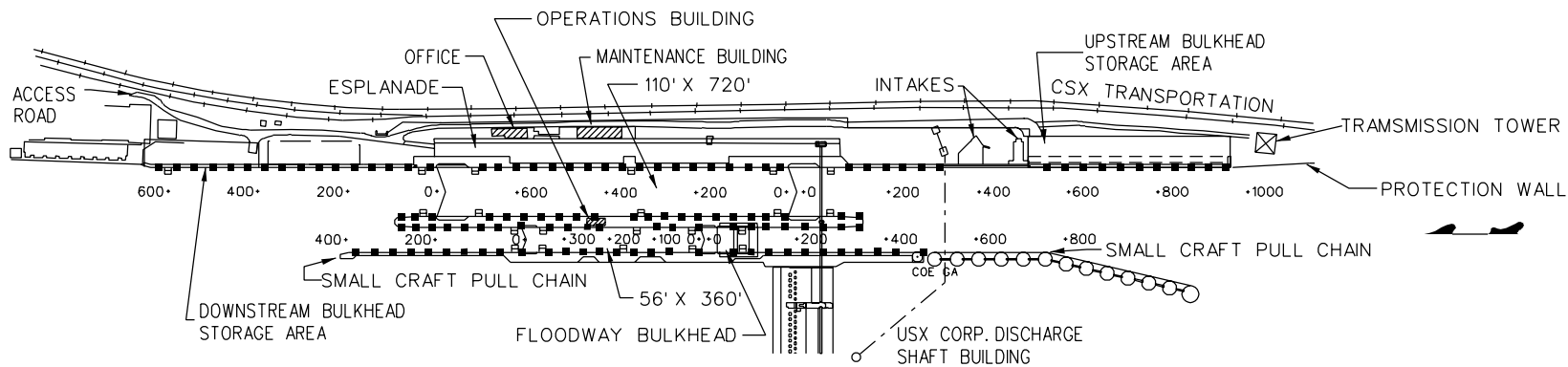
NORFOLK & SOUTHERN RAILROAD BRIDGE
 CHANNEL SPAN
 MILE 11.64

ELEVATION OF LOW STEEL 764.3*
 VERTICAL CLEARANCE AT POOL STAGE 45.6'*
 HORIZONTAL CLEARANCE 393.0'
 * AT MIDDLE OF SPAN

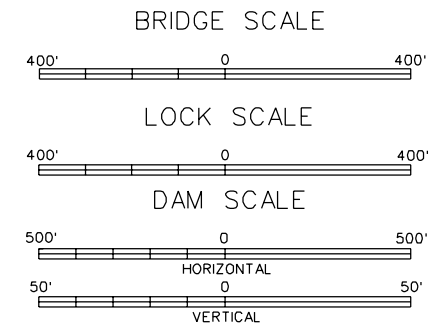


UNION RAILROAD BRIDGE
 CHANNEL SPAN
 MILE 11.56

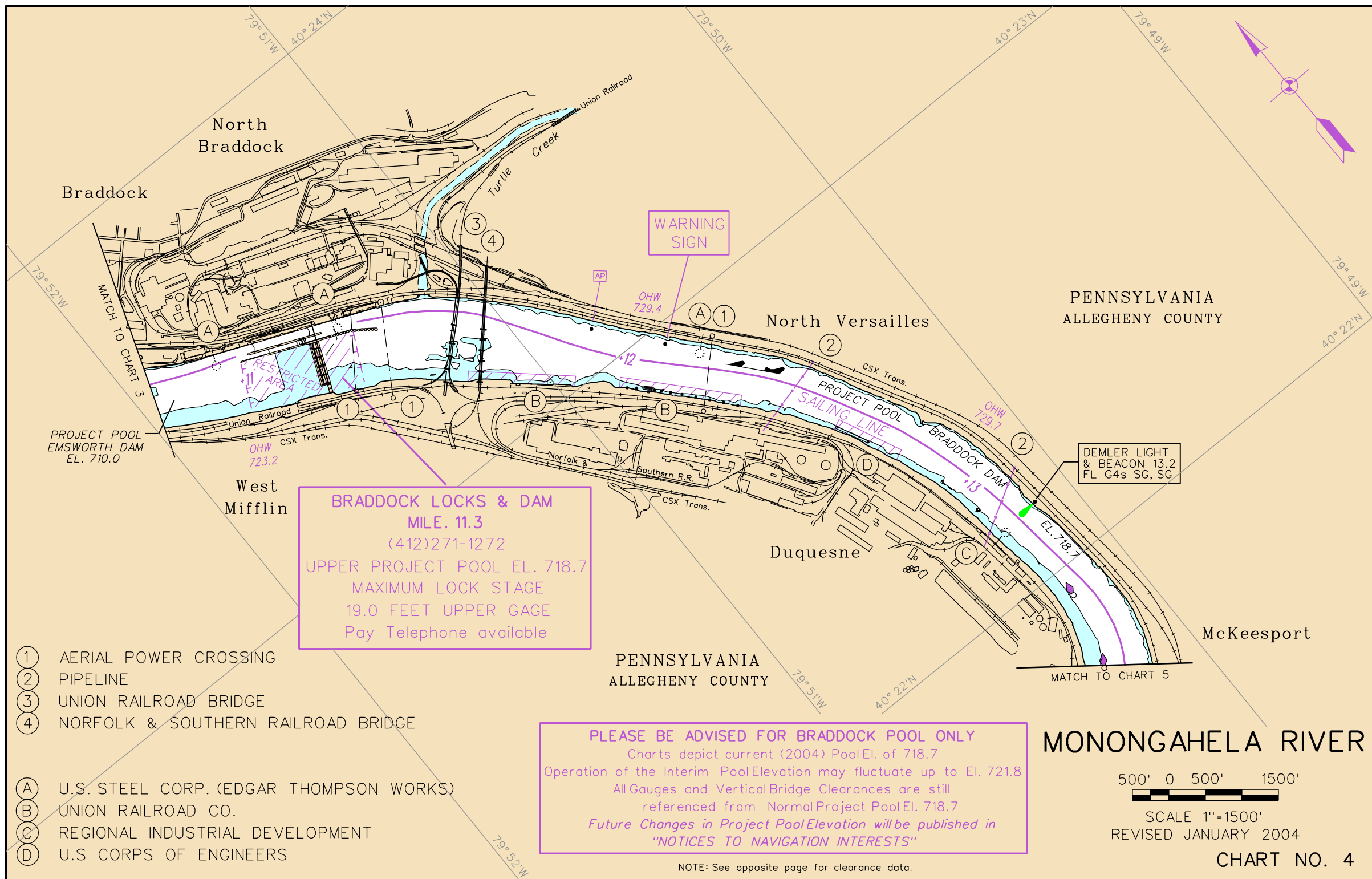
ELEVATION OF LOW STEEL 773.9*
 VERTICAL CLEARANCE AT POOL STAGE 55.2'*
 HORIZONTAL CLEARANCE 378.0'
 * AT MIDDLE OF SPAN

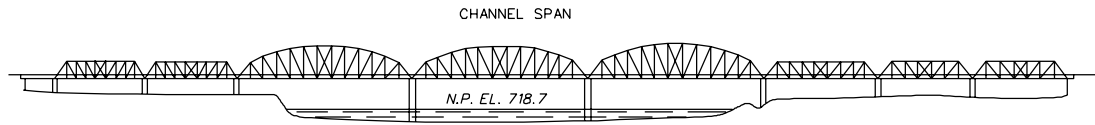


LEGEND
 ■ Check post
 ▬ Ladder



ELEVATIONS LOOKING DOWNSTREAM
 MONONGAHELA RIVER CHART 4



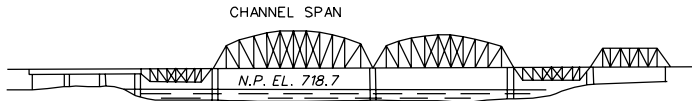


5

MC KEESPORT-DUQUESNE HIGHWAY BRIDGE
CHANNEL SPAN

MILE 14.1

ELEVATION OF LOW STEEL 790.6
VERTICAL CLEARANCE AT POOL STAGE 71.9'
HORIZONTAL CLEARANCE 362.0'



6

UNION RAILROAD BRIDGE
CHANNEL SPAN

MILE 14.29

ELEVATION OF LOW STEEL 767.8
VERTICAL CLEARANCE AT POOL STAGE 49.1'
HORIZONTAL CLEARANCE 324.0'

7

YOUGHIOGHENY RIVER
JEROME STREET BRIDGE
CHANNEL SPAN

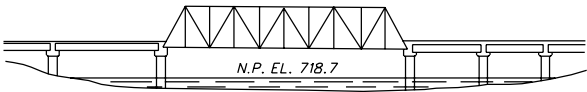
MILE 0.29

ELEVATION OF LOW STEEL 766.0
VERTICAL CLEARANCE AT POOL STAGE 47.3'
HORIZONTAL CLEARANCE 315.0'
(DRAWING NOT AVAILABLE)

PLEASE BE ADVISED FOR BRADDOCK POOL ONLY
Charts depict current (2004) Pool El. of 718.7
Operation of the Interim Pool Elevation may fluctuate up to El. 721.8
All Gauges and Vertical Bridge Clearances are still
referenced from Normal Project Pool El. 718.7
*Future Changes in Project Pool Elevation will be published in
"NOTICES TO NAVIGATION INTERESTS"*

AERIAL POWER CROSSINGS

CROSSING	MILE	ELEVATION	CLEARANCE
1	15.4	790.3	71.6'

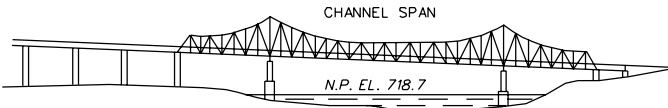


8

YOUGHIOGHENY RIVER
CSX TRANS. RAILROAD BRIDGE
CHANNEL SPAN

MILE 0.25

ELEVATION OF LOW STEEL 749.7
VERTICAL CLEARANCE AT POOL STAGE 31.0'
HORIZONTAL CLEARANCE 248.0'



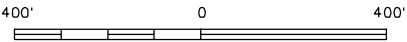
9

MANSFIELD HIGHWAY BRIDGE
CHANNEL SPAN

MILE 16.65

ELEVATION OF LOW STEEL 784.0*
VERTICAL CLEARANCE AT POOL STAGE 65.3*
HORIZONTAL CLEARANCE 480.0'
* AT RIGHT PIER

BRIDGE SCALE

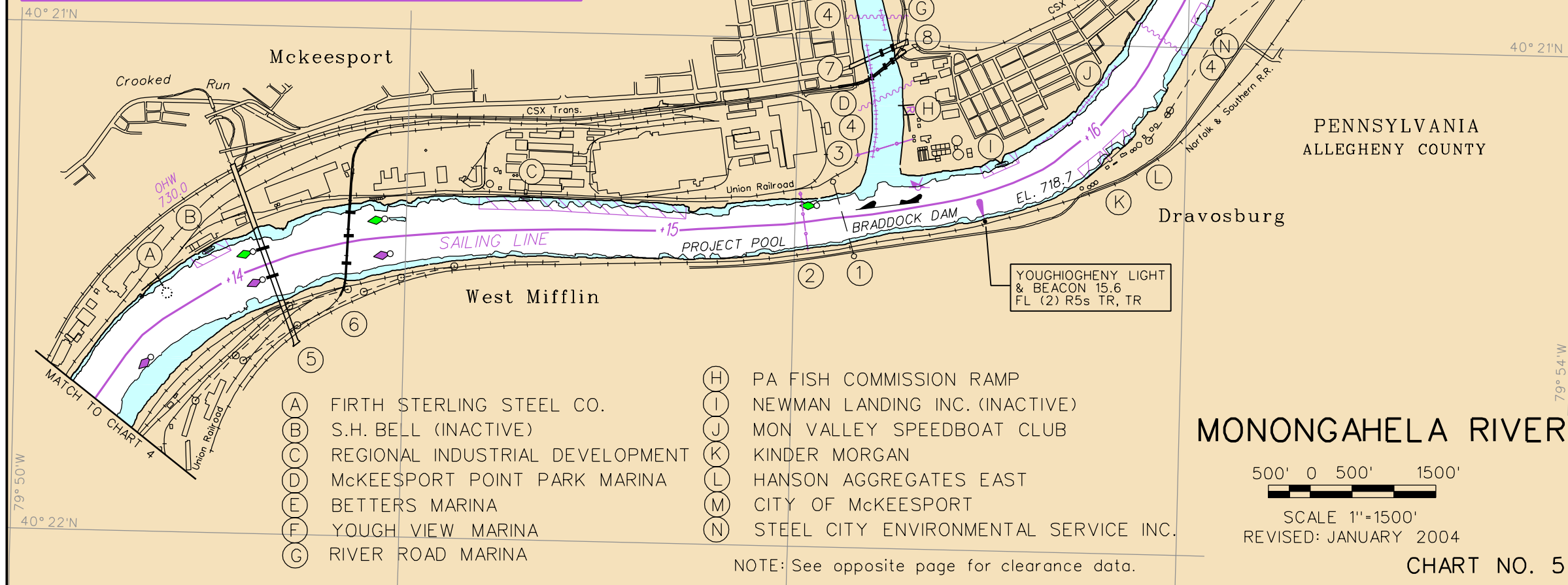


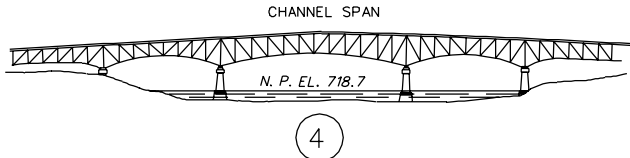
ELEVATIONS LOOKING DOWNSTREAM
MONONGAHELA RIVER CHART 5

- ① AERIAL POWER CROSSING
- ② PIPELINE
- ③ WATER PIPELINE
- ④ SUBMARINE CROSSING
- ⑤ McKEESPORT-DUQUESNE HIGHWAY BRIDGE
- ⑥ UNION RAILROAD BRIDGE
- ⑦ JEROME STREET BRIDGE
- ⑧ CSX TRANS. RAILROAD BRIDGE
- ⑨ MANSFIELD HIGHWAY BRIDGE

PLEASE BE ADVISED FOR BRADDOCK POOL ONLY

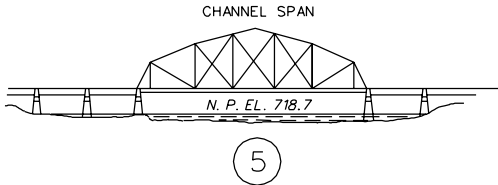
Charts depict current (2004) Pool El. of 718.7
 Operation of the Interim Pool Elevation may fluctuate up to El. 721.8
 All Gauges and Vertical Bridge Clearances are still
 referenced from Normal Project Pool El. 718.7
 Future Changes in Project Pool Elevation will be published in
 "NOTICES TO NAVIGATION INTERESTS"





GLASSPORT HIGHWAY BRIDGE
CHANNEL SPAN
MILE 19.27

ELEVATION OF LOW STEEL 768.2
VERTICAL CLEARANCE AT POOL STAGE 49.5' *
HORIZONTAL CLEARANCE 385.6' *
* AT SPRING LINE



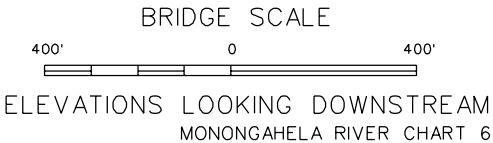
UNION RAILROAD BRIDGE
CHANNEL SPAN
MILE 21.07

ELEVATION OF LOW STEEL 766.2
VERTICAL CLEARANCE AT POOL STAGE 47.5'
HORIZONTAL CLEARANCE 482.0'

AERIAL POWER CROSSINGS

CROSSING	MILE	ELEVATION	CLEARANCE
1	18.4	793.2	74.5'
1	18.5	798.9	80.2'
1	18.9	798.1	79.4'

PLEASE BE ADVISED FOR BRADDOCK POOL ONLY
Charts depict current (2004) Pool El. of 718.7
Operation of the Interim Pool Elevation may fluctuate up to El. 721.8
All Gauges and Vertical Bridge Clearances are still
referenced from Normal Project Pool El. 718.7
Future Changes in Project Pool Elevation will be published in
"NOTICES TO NAVIGATION INTERESTS"



- (A) STEEL CITY ENVIRONMENTAL SERVICE INC.
- (B) STONE & CO.
- (C) U.S. STEEL CORP.
- (D) RIVERVIEW STEEL CORP.
- (E) C & C MARINE MAINTENANCE INC.
- (F) TONOMO MARINE (INACTIVE)
- (G) ARISTECH CHEMICAL CORP.
- (H) MON-VALLEY TRANSPORTATION CENTER, INC.
- (I) MARATHON ASHLAND PETROLEUM L.L.C. (INACTIVE)

PENNSYLVANIA
ALLEGHENY COUNTY

PENNSYLVANIA
ALLEGHENY COUNTY

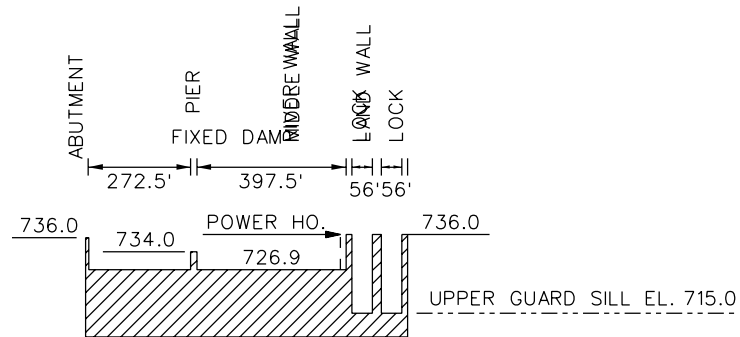
MONONGAHELA RIVER

500' 0 500' 1500'

SCALE 1"=1500'
REVISED: JANUARY 2004

CHART NO. 6

NOTE: See opposite page for clearance data.



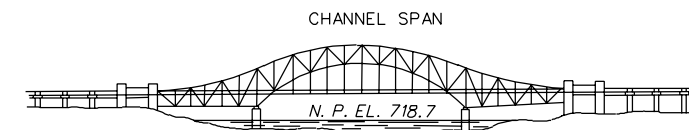
LOCKS & DAM NO. 3

NAVIGATION SUSPENDED - UPPER GAGE 17.5

TELEPHONE NO. 412-384-4532

LOCKS & DAM NO. 3
 UPPER POOL EL. 726.9
 LOWER POOL EL. 718.7
 UPPER GAGE
 ZERO EL. 717.8
 N.P. READS 9.0'
 LOWER GAGE
 ZERO EL. 709.7
 N.P. READS 9.0'

CROSSING	MILE	ELEVATION	CLEARANCE
1	22.8	784.3	65.6'



5

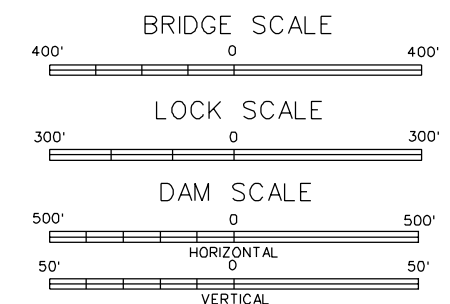
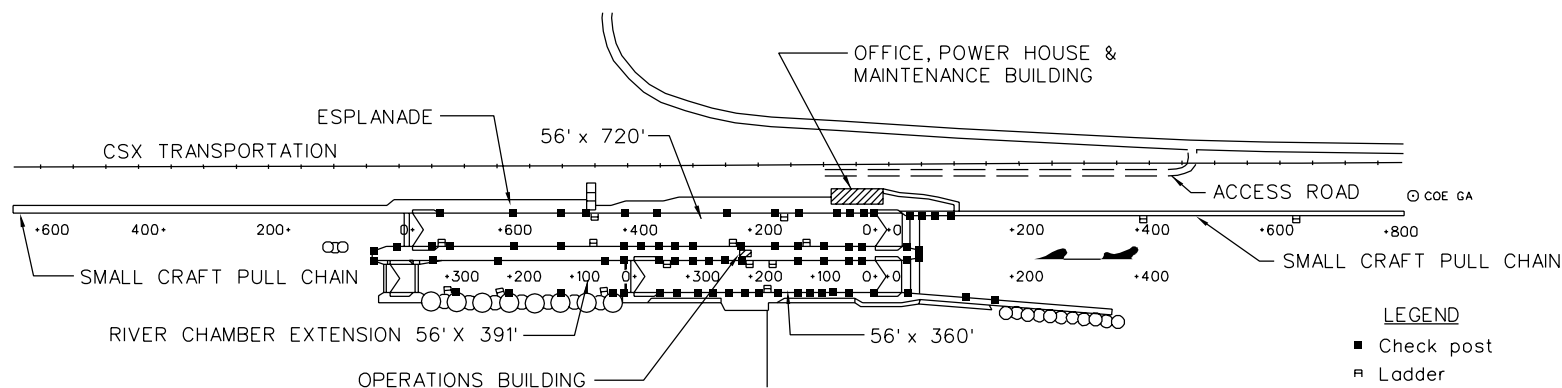
ELIZABETH HIGHWAY BRIDGE CHANNEL SPAN

MILE 22.86

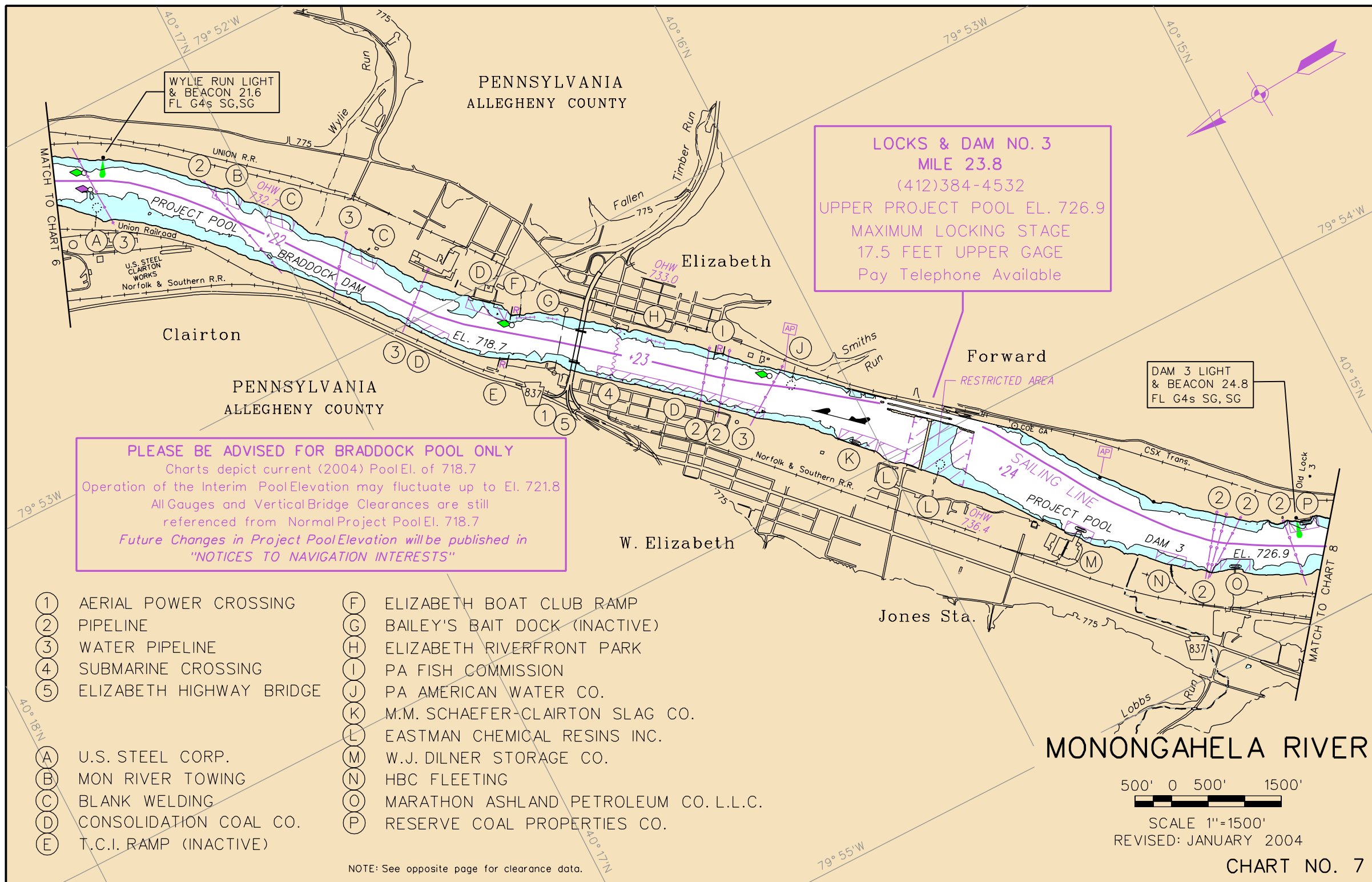
ELEVATION OF LOW STEEL 768.7*
 VERTICAL CLEARANCE AT POOL STAGE 50.0'*
 HORIZONTAL CLEARANCE 434.5'*
 * MIDDLE 400'

PLEASE BE ADVISED FOR BRADDOCK POOL ONLY

Charts depict current (2004) Pool El. of 718.7
 Operation of the Interim Pool Elevation may fluctuate up to El. 721.8
 All Gauges and Vertical Bridge Clearances are still
 referenced from Normal Project Pool El. 718.7
 Future Changes in Project Pool Elevation will be published in
 "NOTICES TO NAVIGATION INTERESTS"

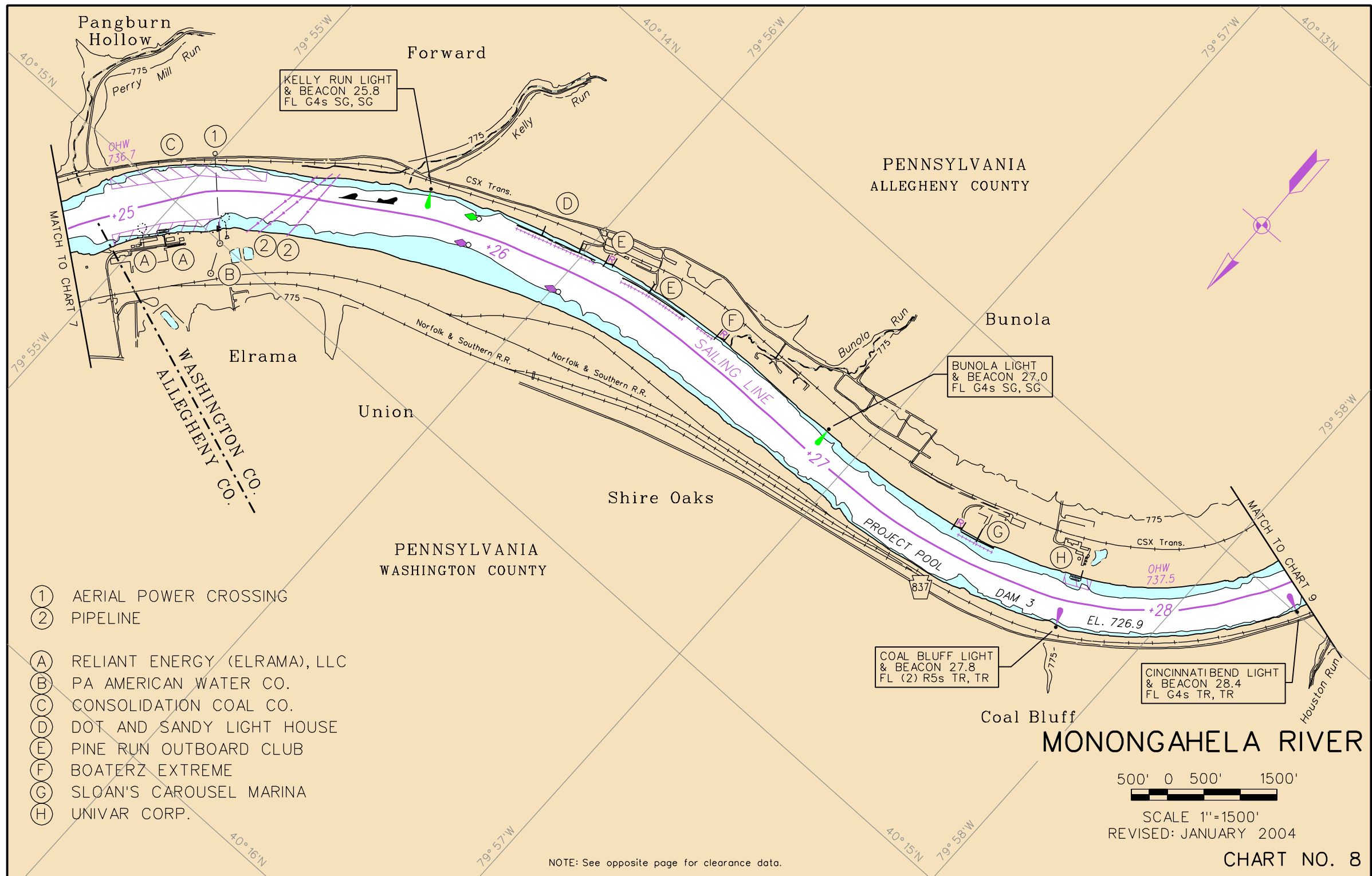


ELEVATIONS LOOKING DOWNSTREAM
 MONONGAHELA RIVER CHART 7



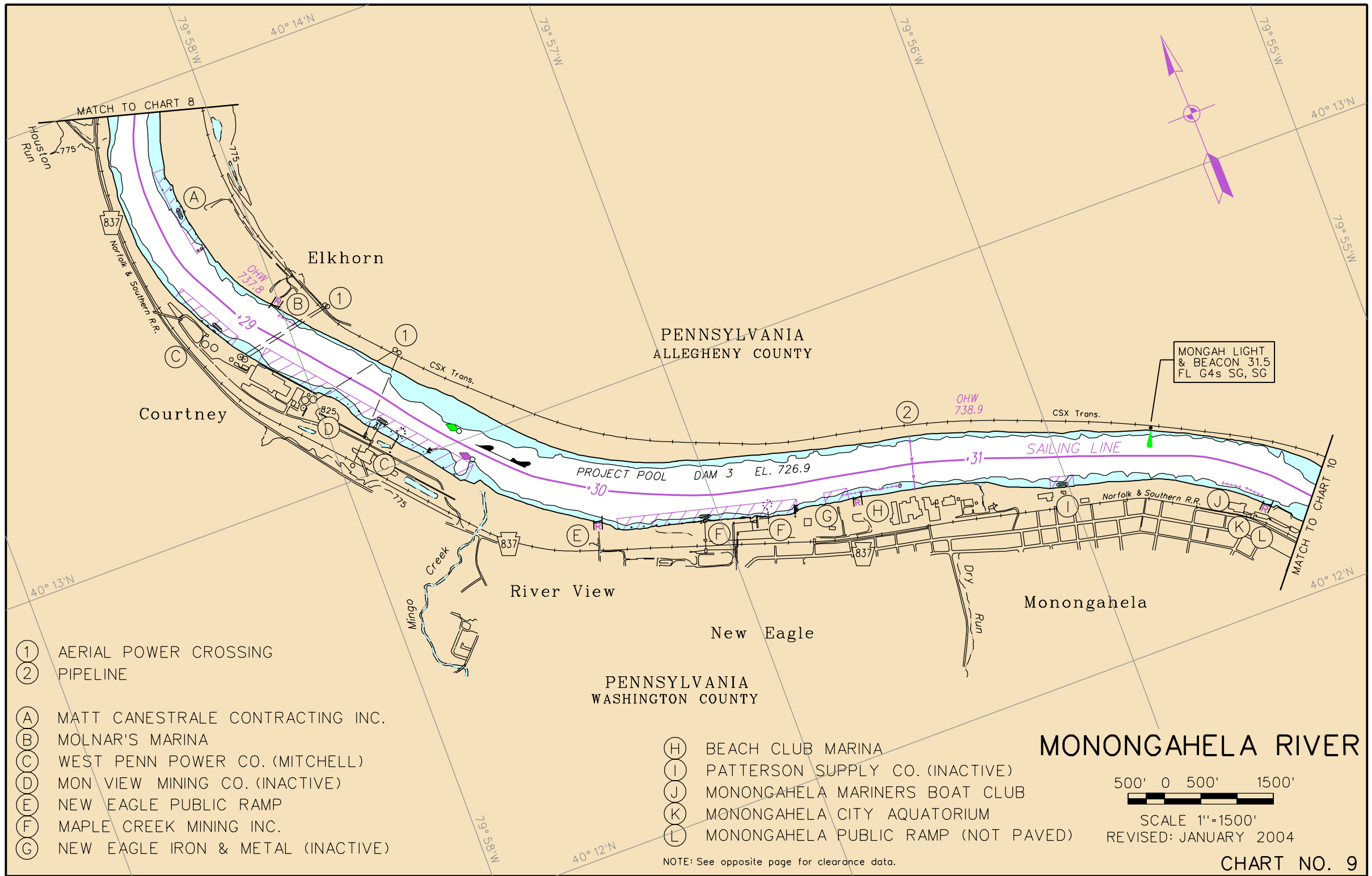
AERIAL POWER CROSSINGS

CROSSING	MILE	ELEVATION	CLEARANCE
1	25.3	805.3	78.5'



AERIAL POWER CROSSINGS

CROSSING	MILE	ELEVATION	CLEARANCE
1	29.1	803.9	77.0'
1	29.2	825.5	98.6'
1	29.3	825.5	98.6'



- (1) AERIAL POWER CROSSING
- (2) PIPELINE
- (A) MATT CANESTRALE CONTRACTING INC.
- (B) MOLNAR'S MARINA
- (C) WEST PENN POWER CO. (MITCHELL)
- (D) MON VIEW MINING CO. (INACTIVE)
- (E) NEW EAGLE PUBLIC RAMP
- (F) MAPLE CREEK MINING INC.
- (G) NEW EAGLE IRON & METAL (INACTIVE)

- (H) BEACH CLUB MARINA
- (I) PATTERSON SUPPLY CO. (INACTIVE)
- (J) MONONGAHELA MARINERS BOAT CLUB
- (K) MONONGAHELA CITY AQUATORIUM
- (L) MONONGAHELA PUBLIC RAMP (NOT PAVED)

500' 0 500' 1500'
SCALE 1"=1500'
REVISED: JANUARY 2004

MONGAH LIGHT
& BEACON 31.5
FL G4s SG, SG

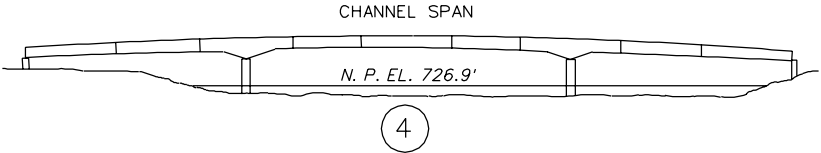
PENNSYLVANIA
ALLEGHENY COUNTY

PENNSYLVANIA
WASHINGTON COUNTY

MONONGAHELA RIVER

NOTE: See opposite page for clearance data.

CHART NO. 9



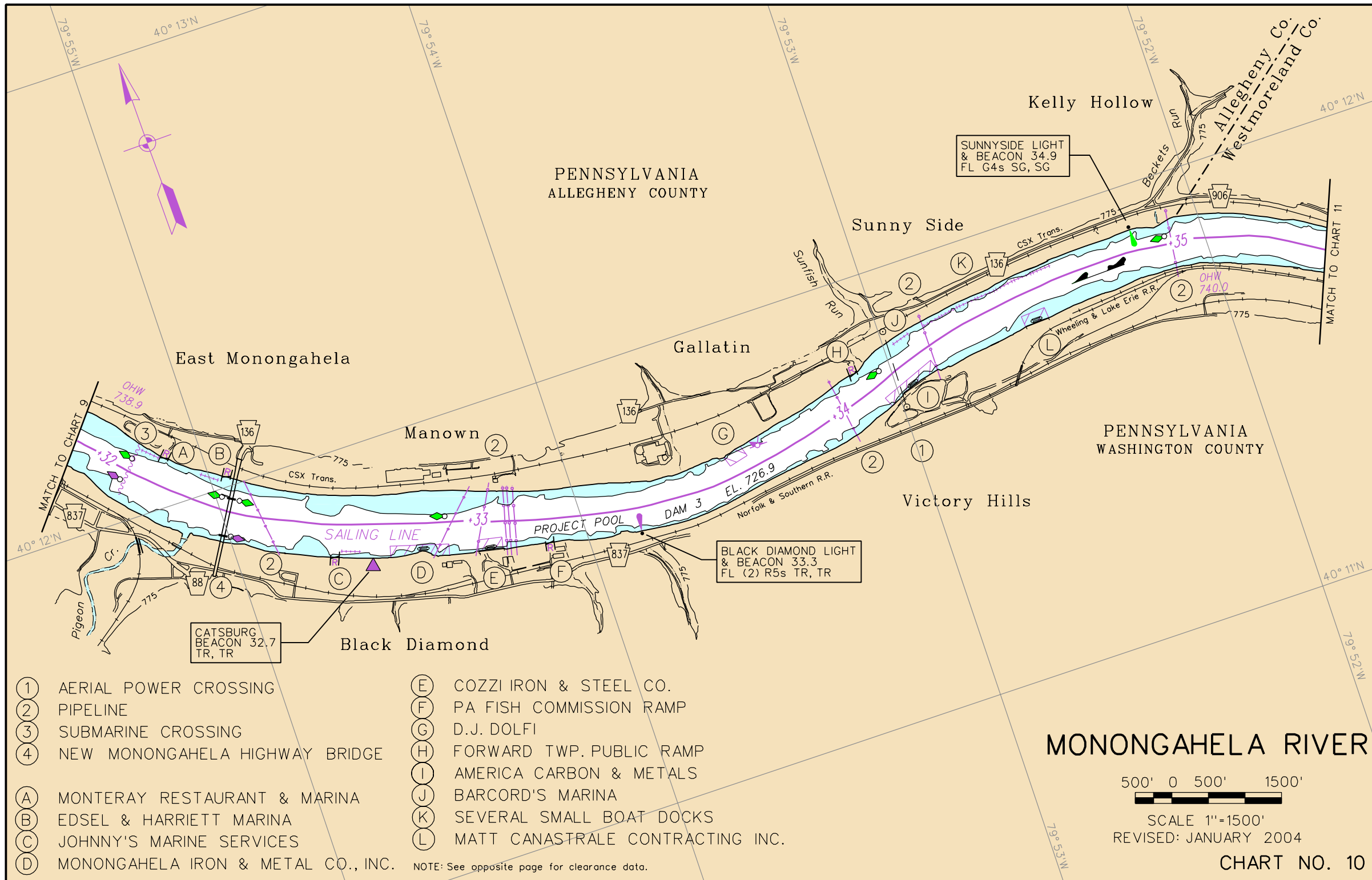
NEW MONONGAHELA HIGHWAY BRIDGE
CHANNEL SPAN
MILE 32.37

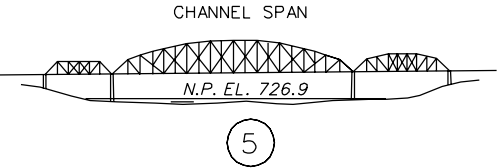
ELEVATION OF LOW STEEL 775.9
VERTICAL CLEARANCE AT POOL STAGE 49.0'
HORIZONTAL CLEARANCE 520.0'

AERIAL POWER CROSSINGS

CROSSING	MILE	ELEVATION	CLEARANCE
1	34.2	803.9	77.0'

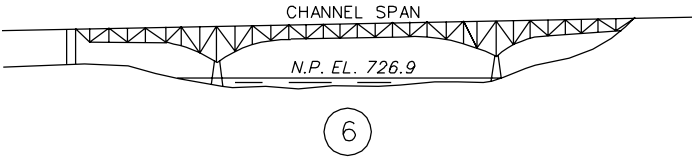






DONORA-WEBSTER HIGHWAY BRIDGE
CHANNEL SPAN
MILE 36.34

ELEVATION OF LOW STEEL 781.8*
VERTICAL CLEARANCE AT POOL STAGE 54.9'*
HORIZONTAL CLEARANCE 502.2'
* AT MIDDLE OF SPAN.



DONORA-MONESSON HIGHWAY BRIDGE
CHANNEL SPAN
MILE 38.07

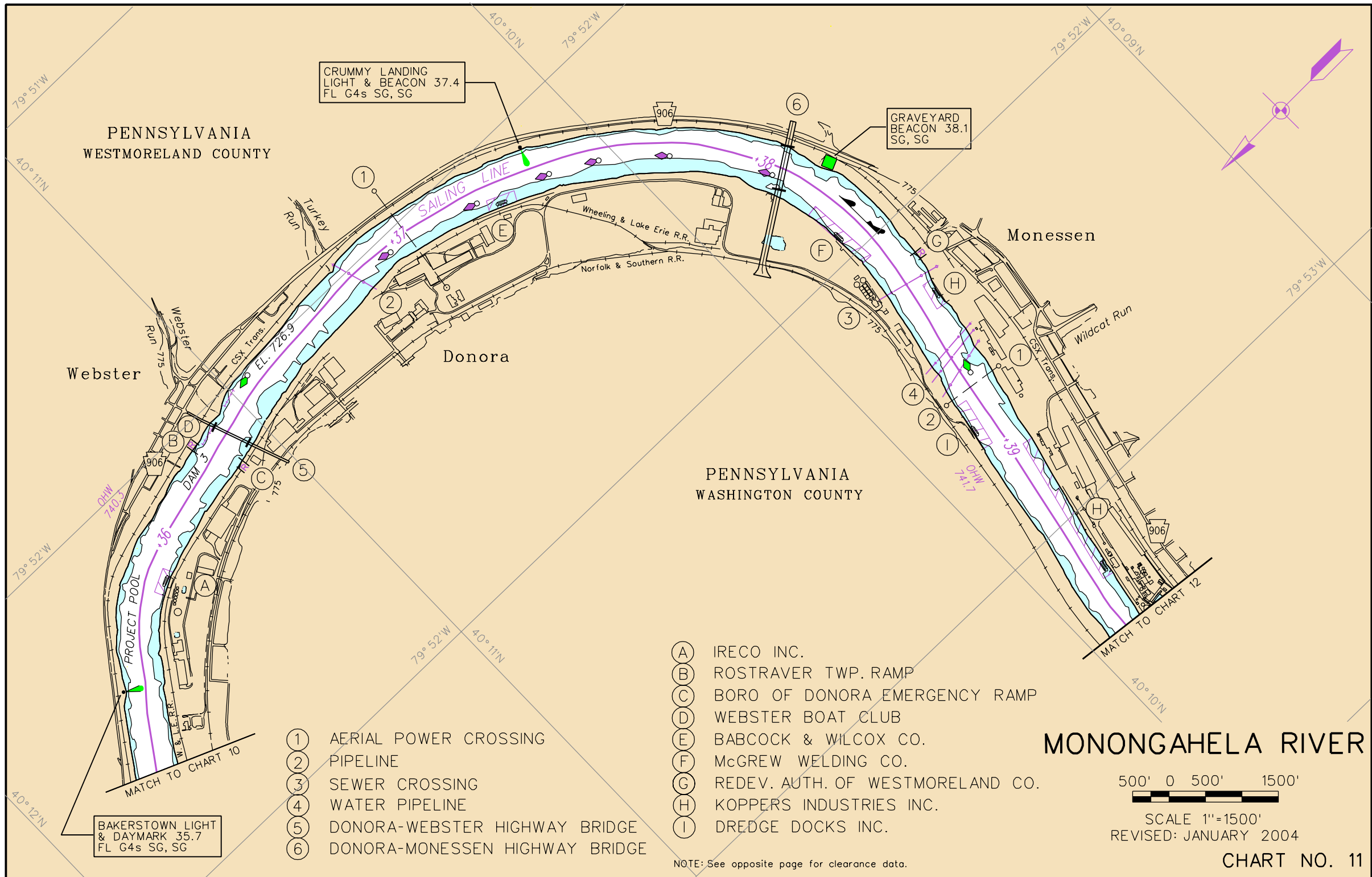
ELEVATION OF LOW STEEL 774.0*
VERTICAL CLEARANCE AT POOL STAGE 47.1'*
HORIZONTAL CLEARANCE 594.0'
*FOR 557 FEET OF CHANNEL SPAN

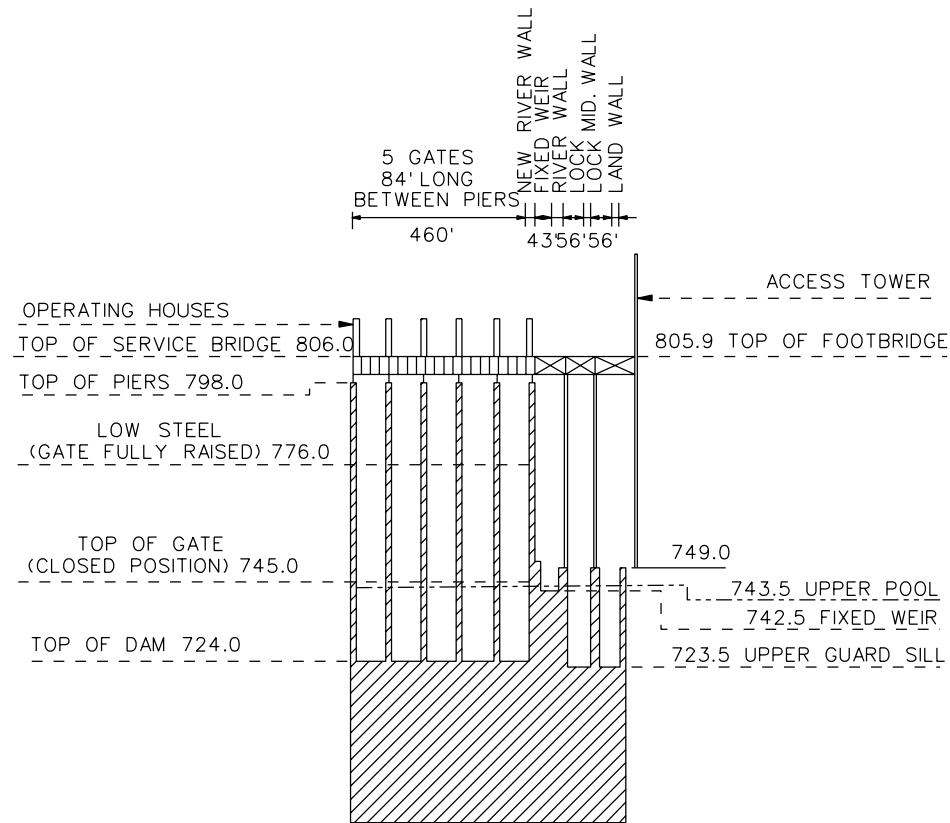
AERIAL POWER CROSSINGS

CROSSING	MILE	ELEVATION	CLEARANCE
1	37.1	823.8	96.9'
1	38.8	813.1	86.2'



ELEVATIONS LOOKING DOWNSTREAM
MONONGAHELA RIVER CHART 11

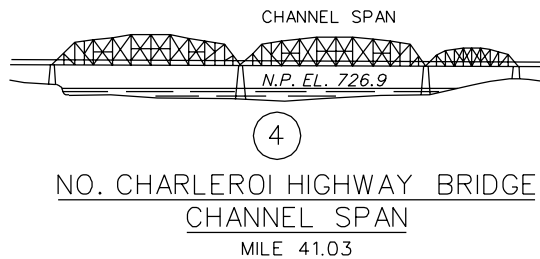




LOCKS & DAM NO. 4

NAVIGATION SUSPENDED - UPPER GAGE 12.5
TELEPHONE NO. 724-684-8442

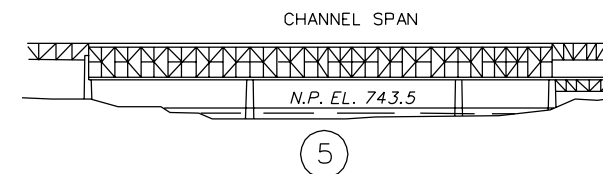
LOCKS & DAM NO. 4	
UPPER POOL EL.	743.5
LOWER POOL EL.	726.9
UPPER GAGE	
ZERO EL.	735.0
N.P. READS	9.0'
LOWER GAGE	
ZERO EL.	717.5
N.P. READS	9.0'



ELEVATION OF LOW STEEL 787.5*
VERTICAL CLEARANCE AT POOL STAGE 60.6'*
HORIZONTAL CLEARANCE 388.7'
* AT MIDDLE OF SPAN

AERIAL POWER CROSSINGS

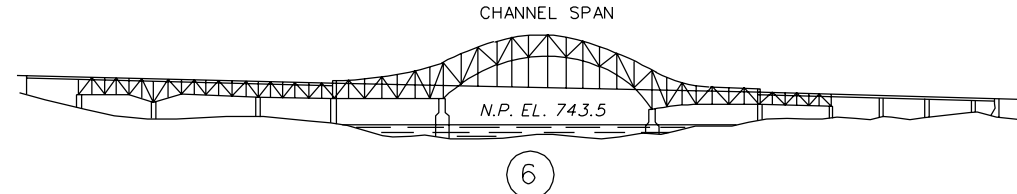
CROSSING	MILE	ELEVATION	CLEARANCE
1	39.8	824.3	97.4'
1	41.7	814.1	78.8'
1	43.2	846.5	103.0'



WHEELING & LAKE ERIE RAILROAD BRIDGE

CHANNEL SPAN
MILE 43.25

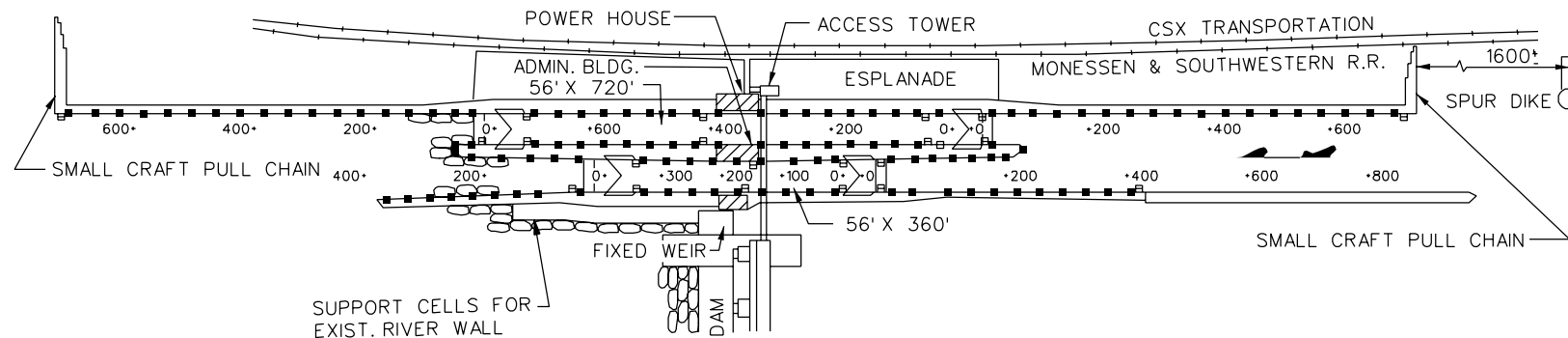
ELEVATION OF LOW STEEL 803.2
VERTICAL CLEARANCE AT POOL STAGE 59.7'
HORIZONTAL CLEARANCE 425.0'



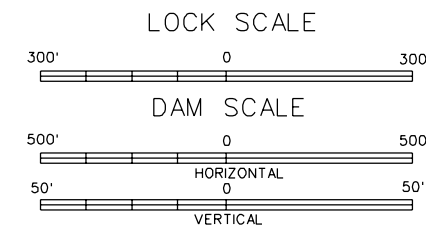
BELLE VERNON HIGHWAY BRIDGE

CHANNEL SPAN
MILE 43.33

ELEVATION OF LOW STEEL 787.5*
VERTICAL CLEARANCE AT POOL STAGE 44.0'*
HORIZONTAL CLEARANCE 400.0'
* MINIMUM



LEGEND
■ Check post
▢ Ladder

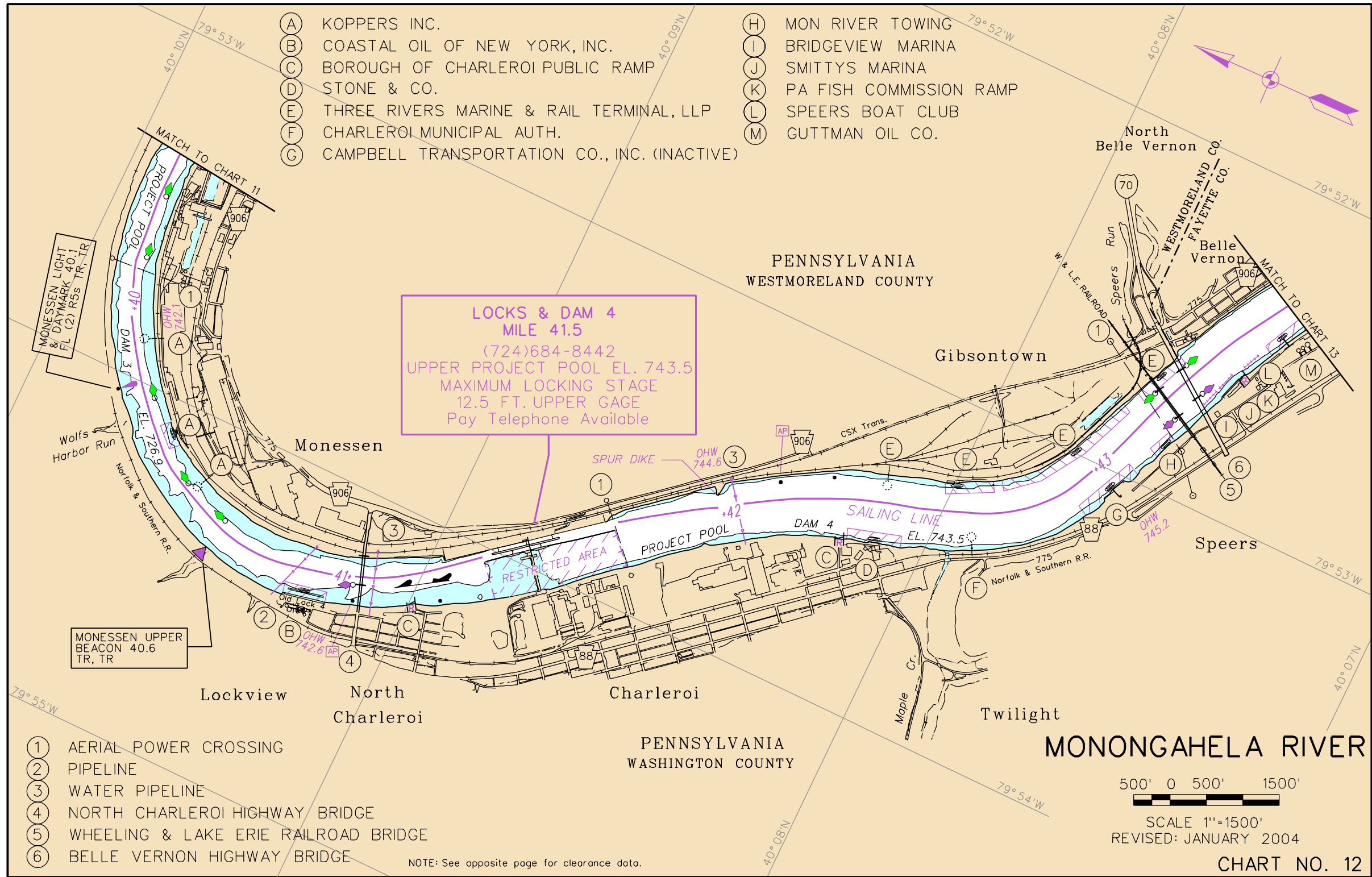


ELEVATIONS LOOKING DOWNSTREAM
MONONGAHELA RIVER CHART 12

- (A) KOPPERS INC.
- (B) COASTAL OIL OF NEW YORK, INC.
- (C) BOROUGH OF CHARLEROI PUBLIC RAMP
- (D) STONE & CO.
- (E) THREE RIVERS MARINE & RAIL TERMINAL, LLP
- (F) CHARLEROI MUNICIPAL AUTH.
- (G) CAMPBELL TRANSPORTATION CO., INC. (INACTIVE)

- (H) MON RIVER TOWING
- (I) BRIDGEVIEW MARINA
- (J) SMITTYS MARINA
- (K) PA FISH COMMISSION RAMP
- (L) SPEERS BOAT CLUB
- (M) GUTTMAN OIL CO.

LOCKS & DAM 4
MILE 41.5
 (724)684-8442
 UPPER PROJECT POOL EL. 743.5
 MAXIMUM LOCKING STAGE
 12.5 FT. UPPER GAGE
 Pay Telephone Available



- (1) AERIAL POWER CROSSING
- (2) PIPELINE
- (3) WATER PIPELINE
- (4) NORTH CHARLEROI HIGHWAY BRIDGE
- (5) WHEELING & LAKE ERIE RAILROAD BRIDGE
- (6) BELLE VERNON HIGHWAY BRIDGE

NOTE: See opposite page for clearance data.

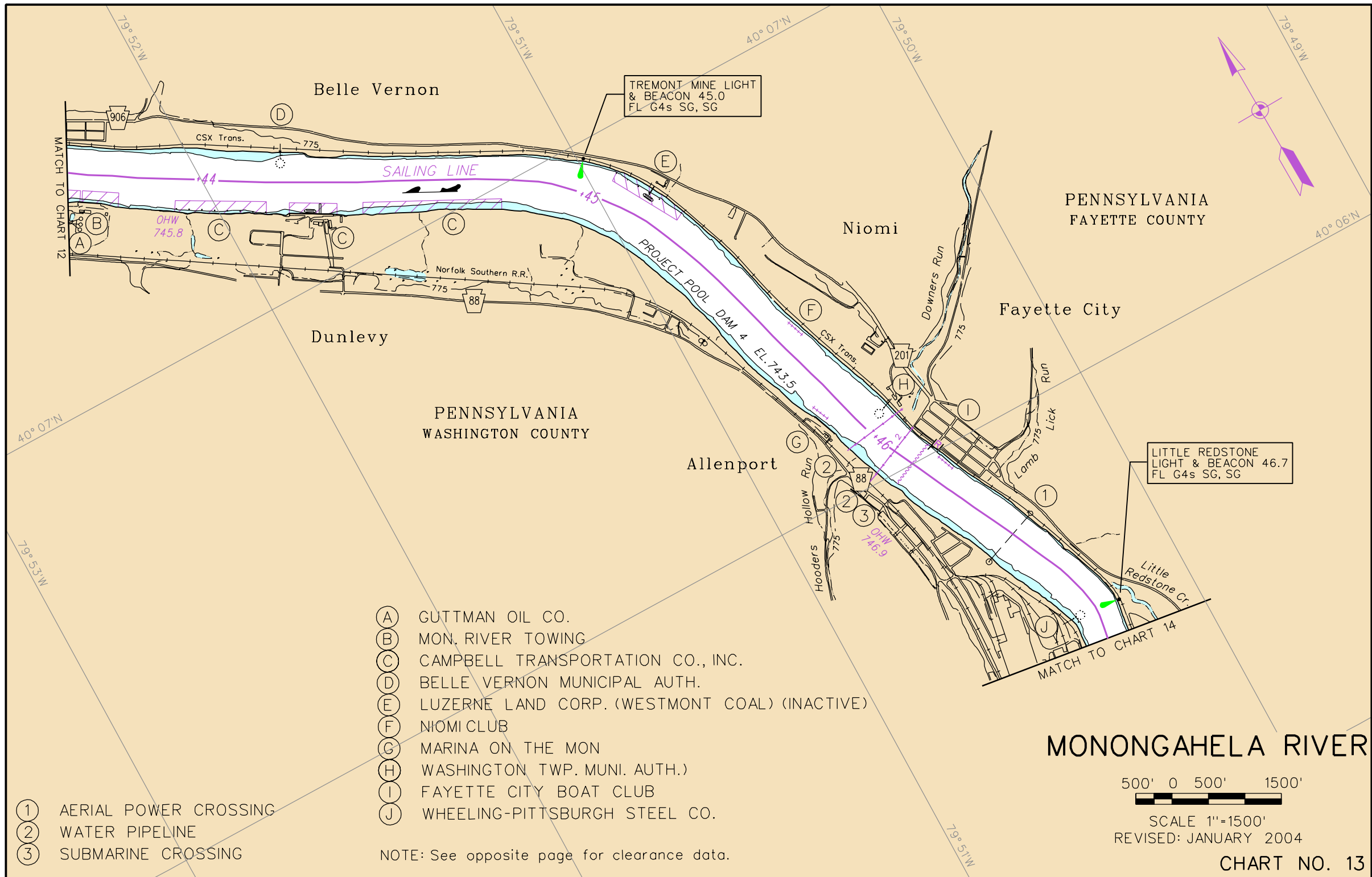
MONONGAHELA RIVER

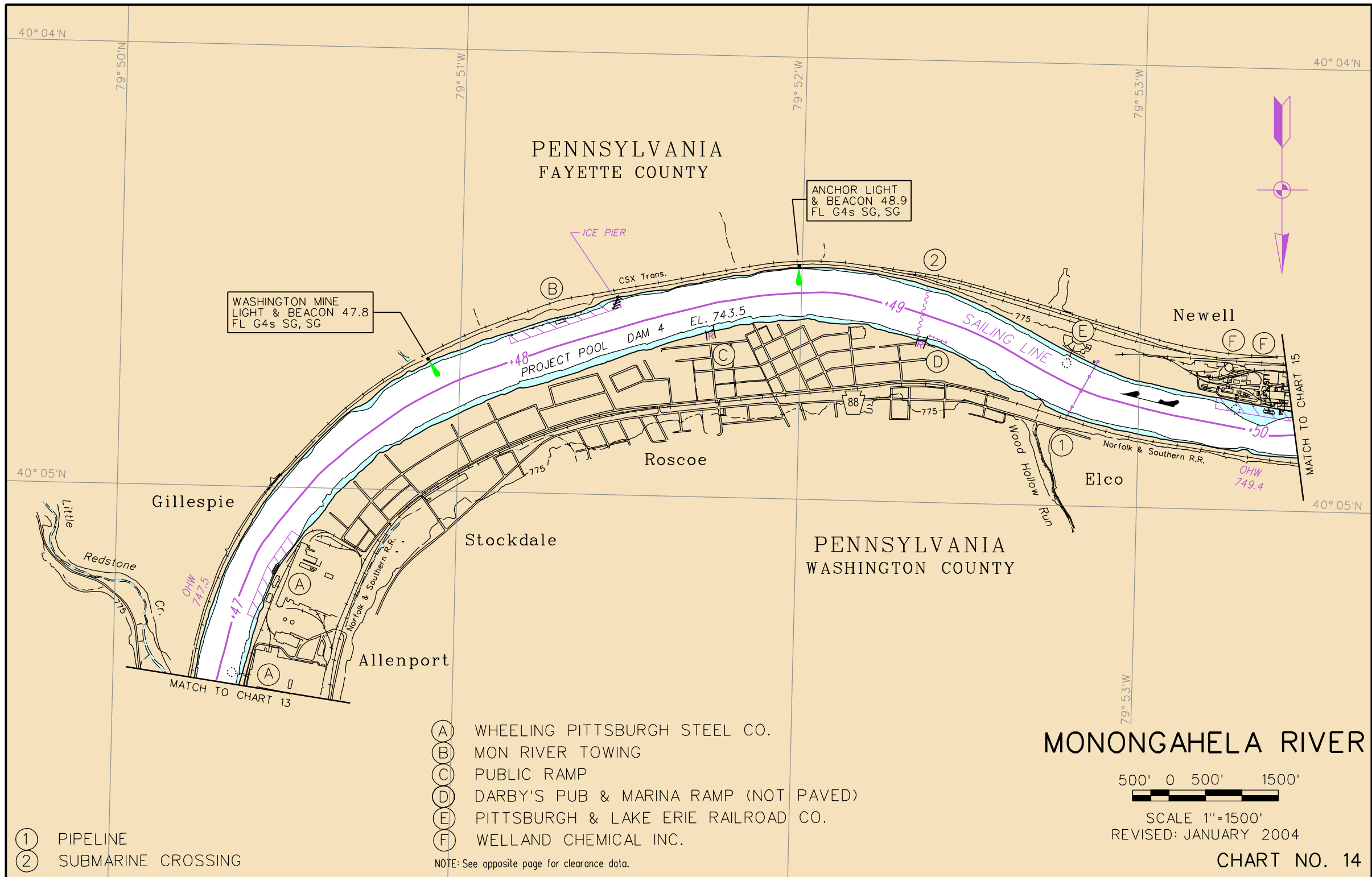


CHART NO. 12

AERIAL POWER CROSSINGS

CROSSING	MILE	ELEVATION	CLEARANCE
1	46.3	851.3	107.8'



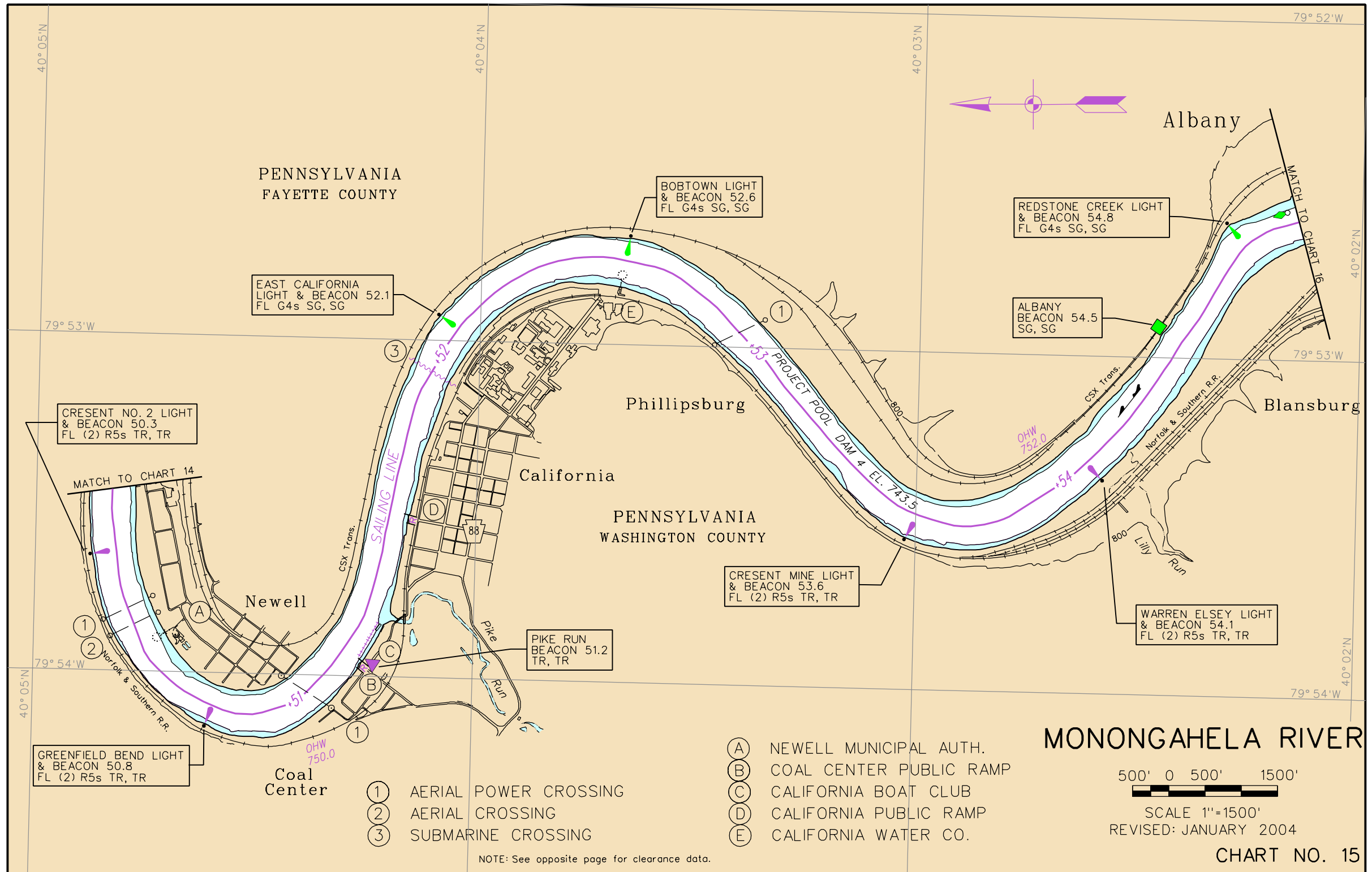


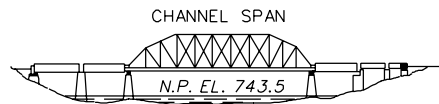
AERIAL POWER CROSSINGS

CROSSING	MILE	ELEVATION	CLEARANCE
1	50.4	803.5	60.0'
1	51.1	809.5	66.0'
1	53.0	812.8	69.3'

AERIAL CROSSINGS

CROSSING	MILE	ELEVATION	CLEARANCE
2	50.5	802.4	58.9'





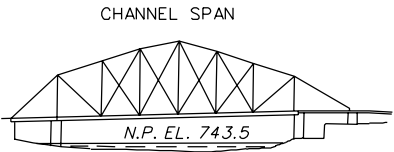
4

NORFOLK & SOUTHERN RAILROAD BRIDGE
CHANNEL SPAN
MILE 55.1

ELEVATION OF LOW STEEL 787.7
VERTICAL CLEARANCE AT POOL STAGE 44.2'
HORIZONTAL CLEARANCE 386.0'

AERIAL POWER CROSSINGS

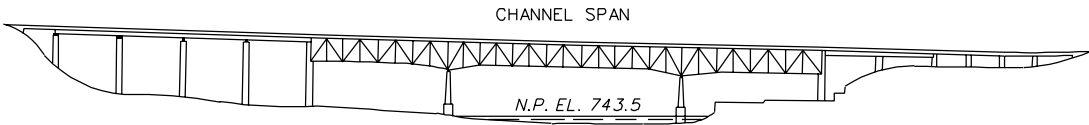
CROSSING	MILE	ELEVATION	CLEARANCE
1	57.3	838.0	94.5'
1	57.8	834.0	90.5'



6

BROWNSVILLE HIGHWAY BRIDGE
CHANNEL SPAN
MILE 56.2

ELEVATION OF LOW STEEL 790.4
VERTICAL CLEARANCE AT POOL STAGE 46.9'
HORIZONTAL CLEARANCE 506.0'
AT MIDDLE OF SPAN

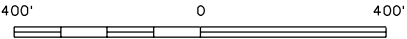


5

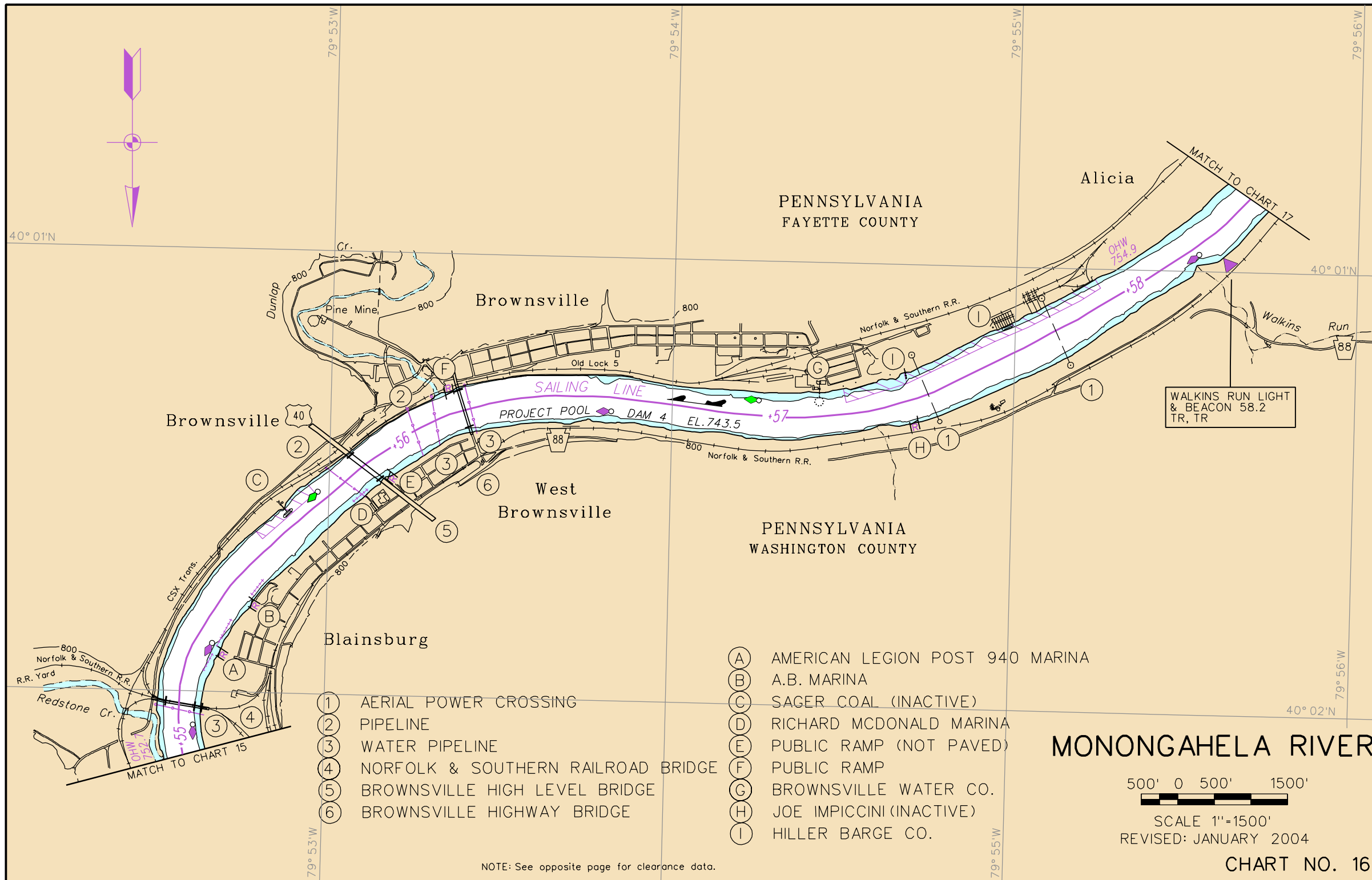
BROWNSVILLE HIGH LEVEL BRIDGE
CHANNEL SPAN
MILE 55.9

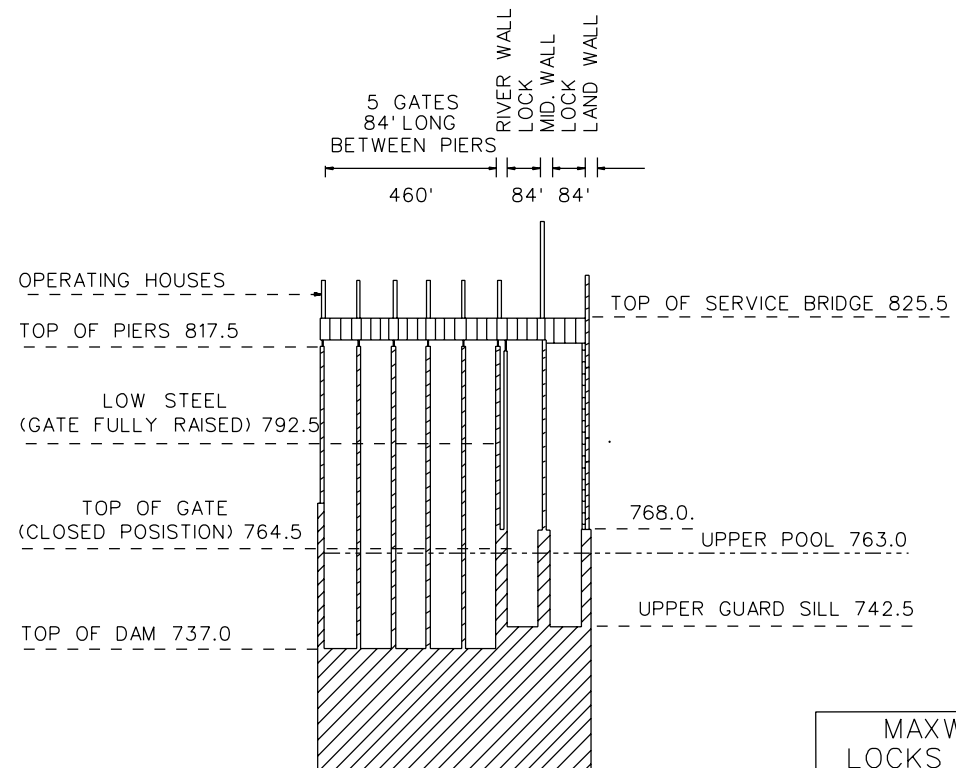
ELEVATION OF LOW STEEL 824.7
VERTICAL CLEARANCE AT POOL STAGE 81.2'
HORIZONTAL CLEARANCE 484.0'
AT RIGHT PIER

BRIDGE SCALE



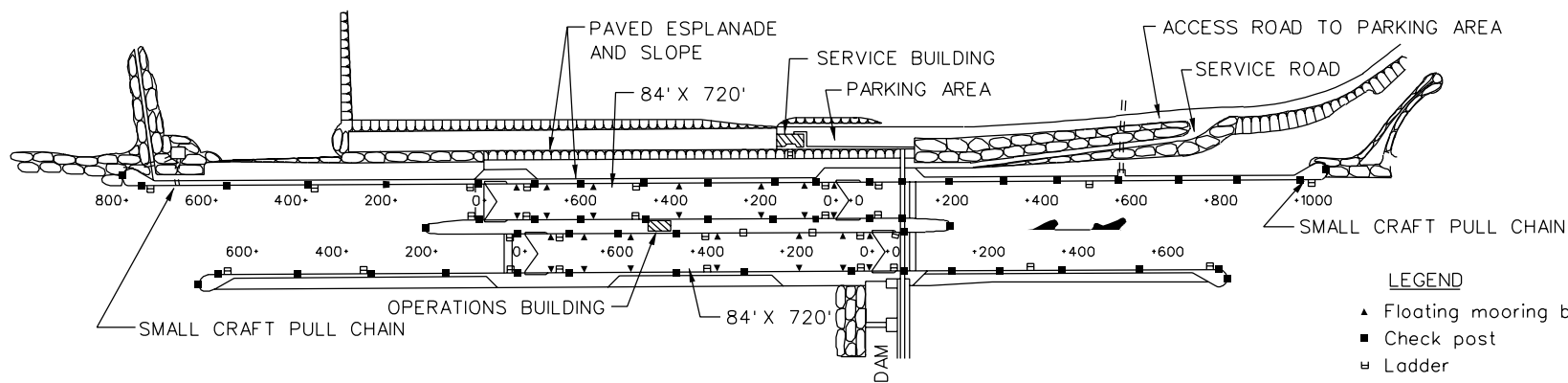
ELEVATIONS LOOKING DOWNSTREAM
MONONGAHELA RIVER CHART 16





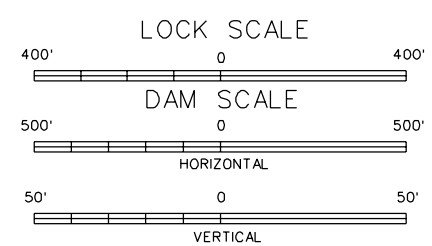
MAXWELL LOCKS & DAM
 NAVIGATION SUSPENDED - UPPER GAGE 12.0
 TELEPHONE NO. 724-785-5027

MAXWELL LOCKS & DAM	
UPPER POOL EL.	763.0
LOWER POOL EL.	743.5
UPPER GAGE	
ZERO EL.	754.0
N.P. READS	9.0"
LOWER GAGE	
ZERO EL.	734.5"
N.P. READS	9.0"



LEGEND

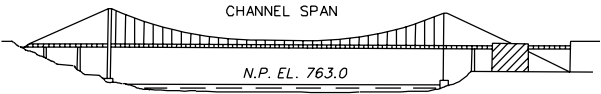
- ▲ Floating mooring bit
- Check post
- ≡ Ladder



ELEVATIONS LOOKING DOWNSTREAM
 MONONGAHELA RIVER CHART 17

AERIAL POWER CROSSINGS

CROSSING	MILE	ELEVATION	CLEARANCE
1	62.2	828.7	65.7'
1	63.4	834.7	71.29'

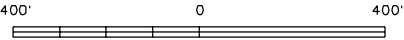


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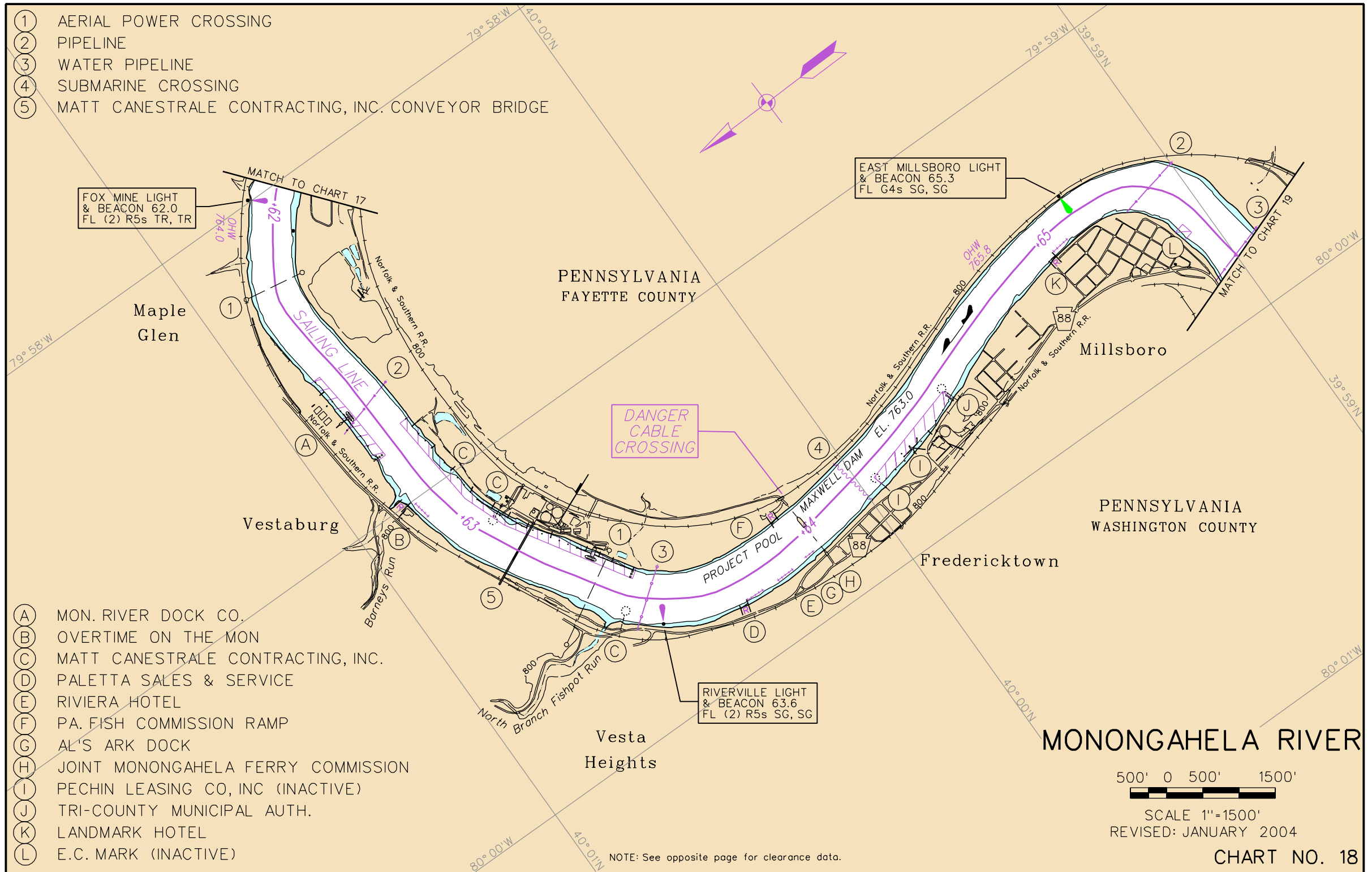
MATT CANESTRALE CONTRACTING, INC.
CONVEYOR BRIDGE
CHANNEL SPAN
MILE 63.17

ELEVATION OF LOW STEEL 833.4*
VERTICAL CLEARANCE AT POOL STAGE 70.4'*
HORIZONTAL CLEARANCE FULL WIDTH
* AT MIDDLE OF SPAN

BRIDGE SCALE



- ① AERIAL POWER CROSSING
- ② PIPELINE
- ③ WATER PIPELINE
- ④ SUBMARINE CROSSING
- ⑤ MATT CANESTRALE CONTRACTING, INC. CONVEYOR BRIDGE



NOTE: See opposite page for clearance data.

AERIAL POWER CROSSINGS

CROSSING	MILE	ELEVATION	CLEARANCE
1	66.6	831.8	68.8'
1	67.2	831.6	68.6'



MATCH TO CHART 20

MATCH TO CHART 18

PENNSYLVANIA
FAYETTE COUNTY

East Millsboro

TEN MILE CREEK LIGHT
& BEACON 66.0
FL (2) R5s TR, TR

Black Dog
Hollow

Rices Landing

RUSH RUN LIGHT
& BEACON 67.8
FL (2) R5s TR, TR

PENNSYLVANIA
GREENE COUNTY

PENNSYLVANIA
WASHINGTON COUNTY

Besco

WILKINS LIGHT
& BEACON 66.5
FL (2) R5s TR, TR

PROJECT POOL
MAXWELL DAM
EL. 763.0

- (A) LUZERNE COAL CORP. (INACTIVE)
- (B) CYPRUS MINERALS CO.
- (C) PA FISH COMMISSION RAMP
- (D) ENGLE'S HOLIDAY HARBOR
- (E) DALES BOAT BASIN RAMP
- (F) TENMILE YACHT CLUB
- (G) REESEMAN'S DOCK
- (H) GREEN COVE YACHT CLUB
- (I) SUNSET MARINA
- (J) TENMILE PUBLIC RAMP
- (K) WASHINGTON CO. RAMP

- (1) AERIAL POWER CROSSING
- (2) WATER PIPELINE
- (3) SUBMARINE CROSSING

NOTE: See opposite page for clearance data.

MONONGAHELA RIVER

500' 0 500' 1500'



SCALE 1"=1500'
REVISED: JANUARY 2004

CHART NO. 19

AERIAL POWER CROSSINGS

CROSSING	MILE	ELEVATION	CLEARANCE
1	71.1	834.0	71.6'

- ⑤

PENNSYLVANIA
FAYETTE COUNTY

PENNSYLVANIA
GREENE COUNTY

MONONGAHELA RIVER

500' 0 500' 1500'

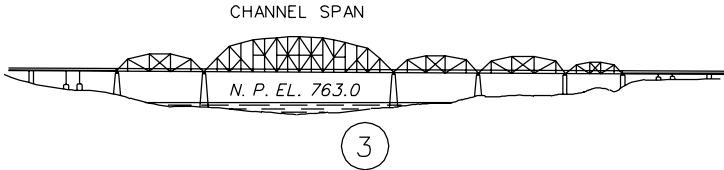
SCALE 1"=1500'
REVISED: JANUARY 2004

CHART NO. 21

NOTE: See opposite page for clearance data.

AERIAL POWER CROSSINGS

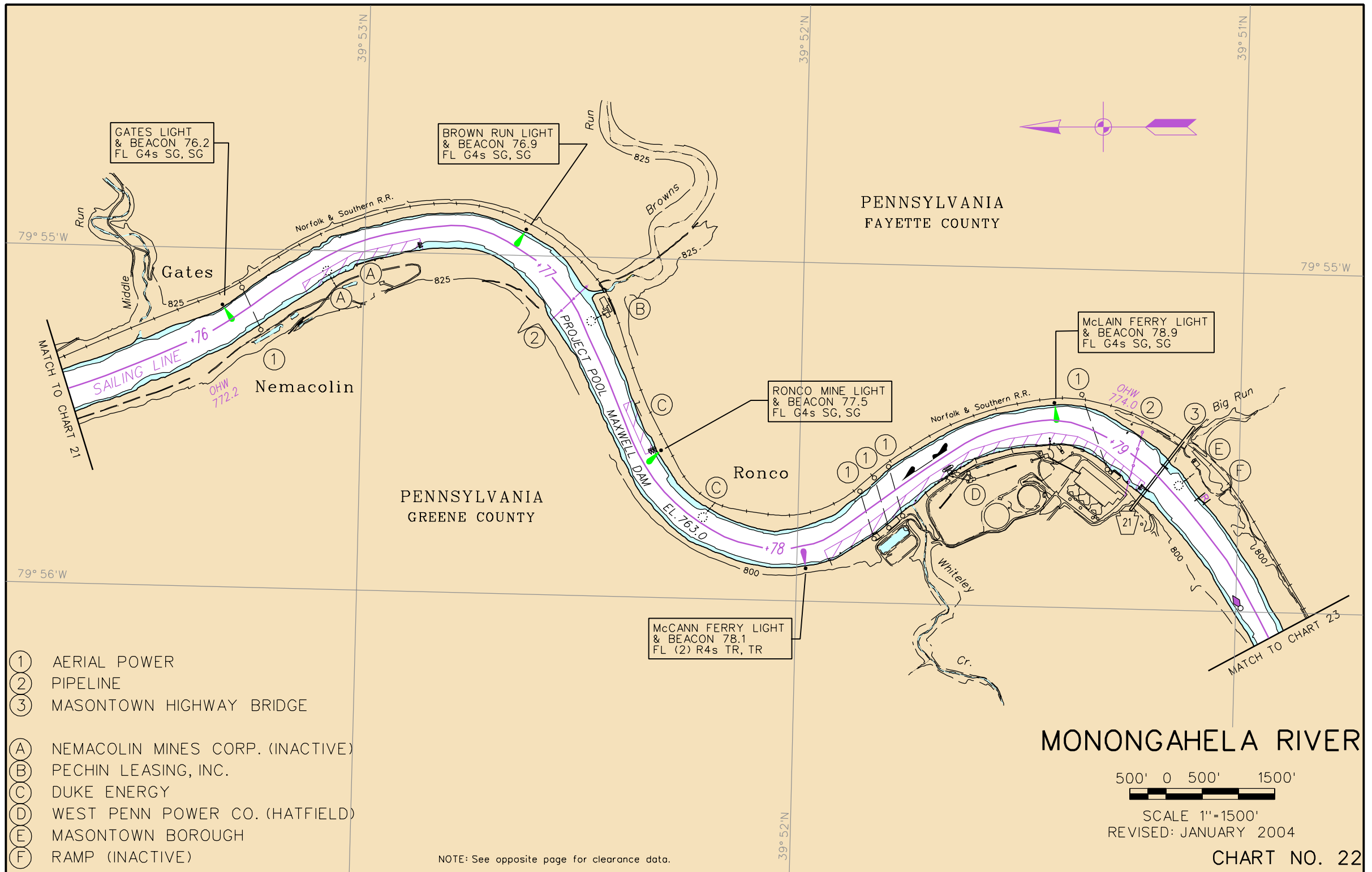
CROSSING	MILE	ELEVATION	CLEARANCE
1	76.2	829.0	66.0'
1	78.3	857.0	94.0'
1	78.8	841.0	78.0'



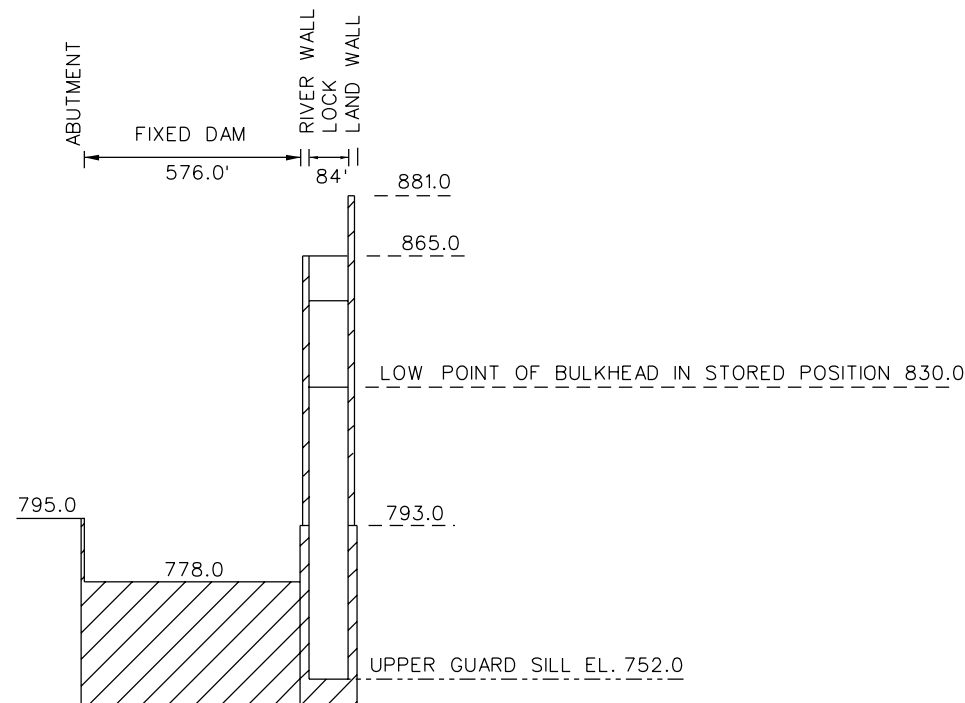
MASONTOWN HIGHWAY BRIDGE
CHANNEL SPAN
MILE 79.15

ELEVATION OF LOW STEEL 828.3
VERTICAL CLEARANCE AT POOL STAGE 65.3'
HORIZONTAL CLEARANCE 383.8'





NOTE: See opposite page for clearance data.

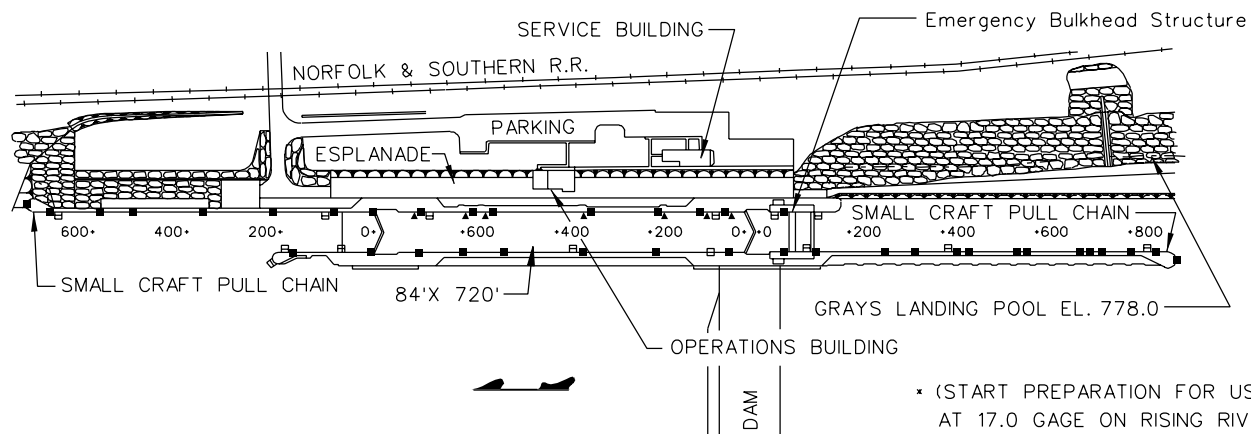


GRAYS LANDING DAM

NAVIGATION SUSPENDED - UPPER GAGE 19.0

TELEPHONE NO. 724-583-8304

GRAYS LANDING DAM	
UPPER POOL EL.	778.0
LOWER POOL EL.	763.0
UPPER GAGE	
ZERO EL.	769.0
N.P. READS	9.0'
LOWER GAGE	
ZERO EL.	754.0
N.P. READS	9.0'



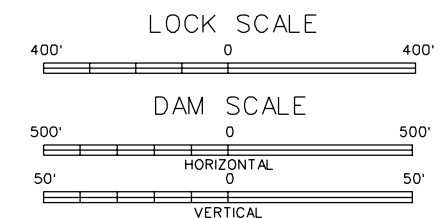
LEGEND

- ▲ Floating mooring bit
- Check post
- ▣ Ladder

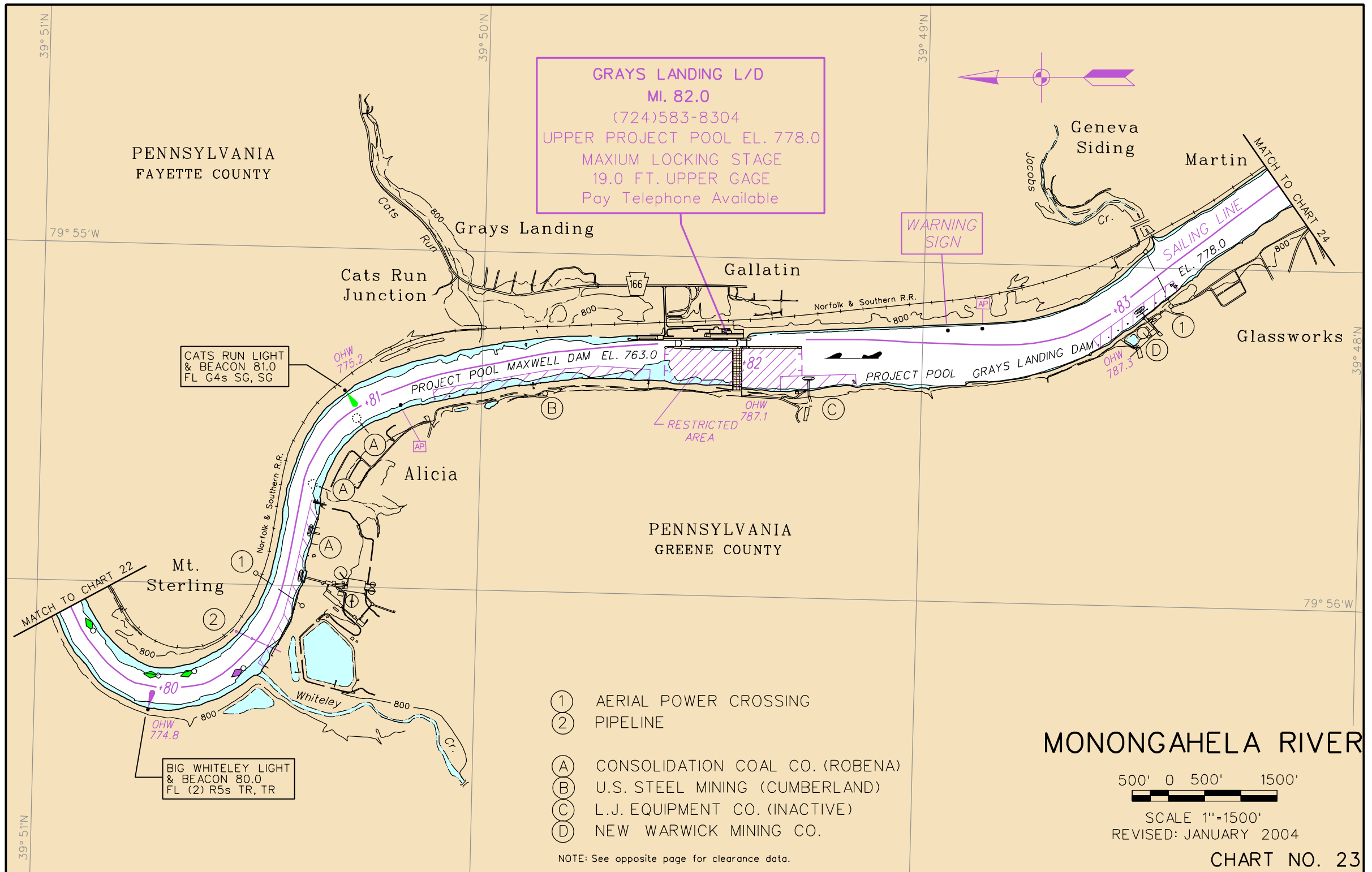
* (START PREPARATION FOR USING LOCK CHAMBER AS FLOODWAY AT 17.0 GAGE ON RISING RIVER; SET BULKHEAD AT 18.5)

AERIAL POWER CROSSINGS

CROSSING	MILE	ELEVATION	CLEARANCE
1	80.3	828.85	65.85'
1	83.2	847.0	69.0'

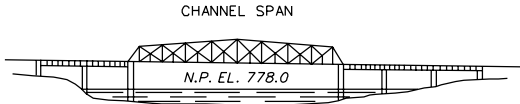


ELEVATIONS LOOKING DOWNSTREAM
MONONGAHELA RIVER CHART 23



AERIAL POWER CROSSINGS

CROSSING	MILE	ELEVATION	CLEARANCE
1	83.9	847.0	69.0'



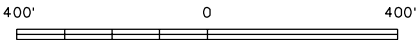
3

NORFOLK & SOUTHERN RAILROAD BRIDGE
CHANNEL SPAN

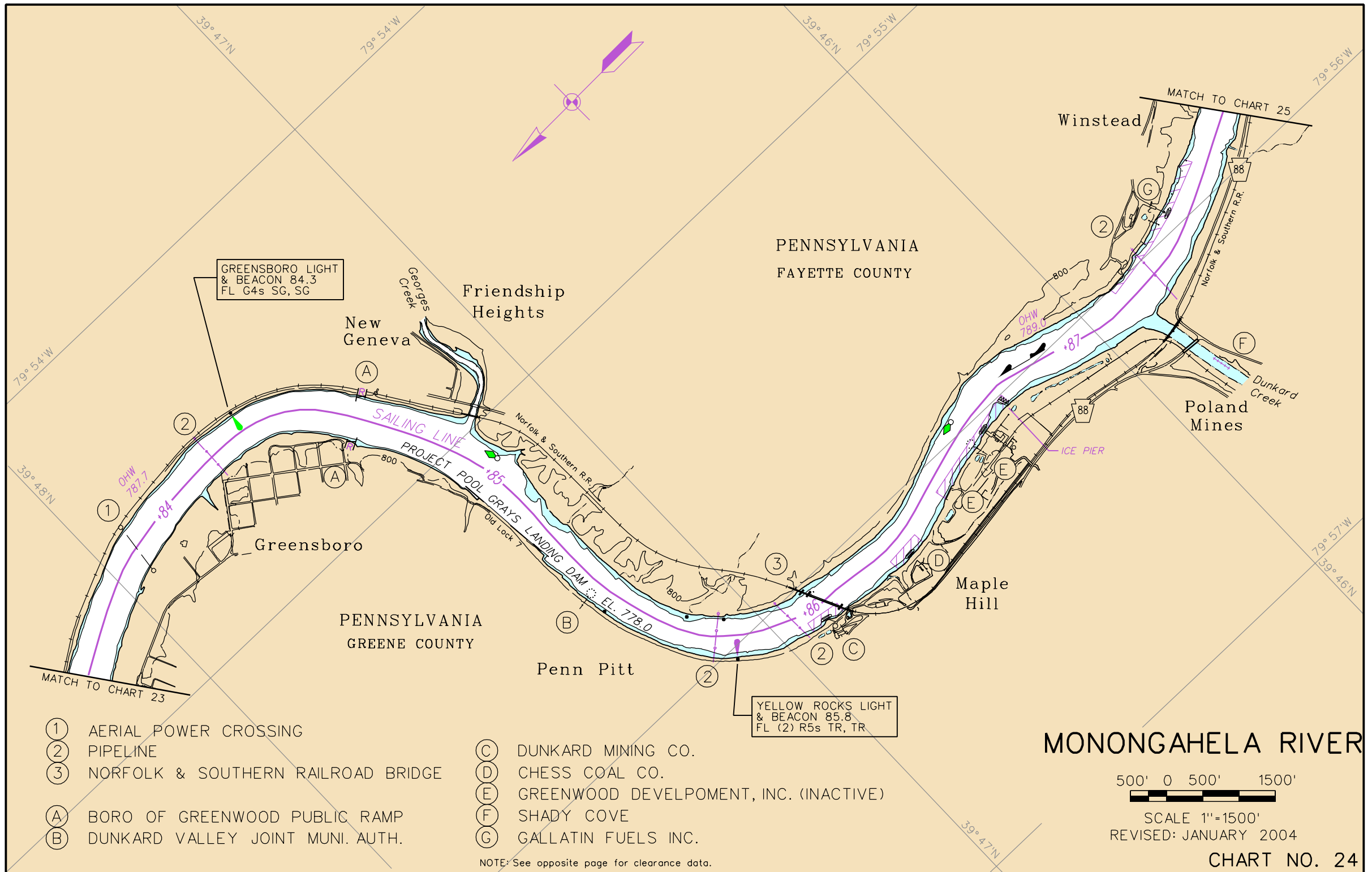
MILE 86.06

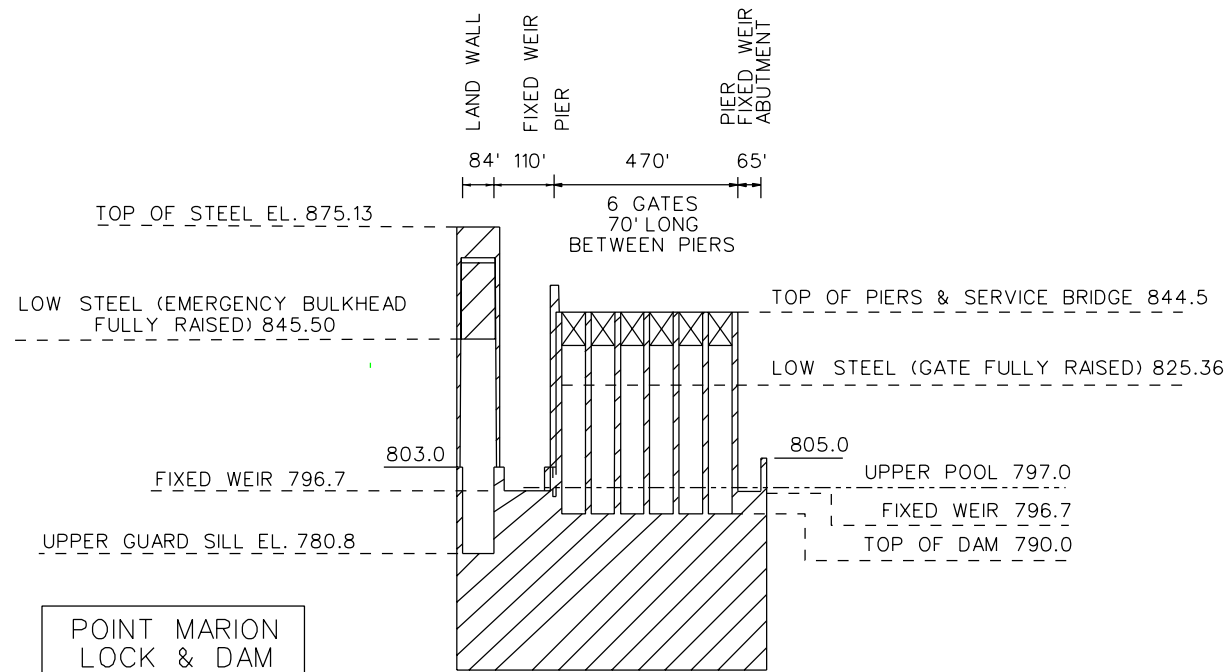
ELEVATION OF LOW STEEL 821.9
VERTICAL CLEARANCE AT POOL STAGE 43.9'
HORIZONTAL CLEARANCE 343.0'

BRIDGE SCALE



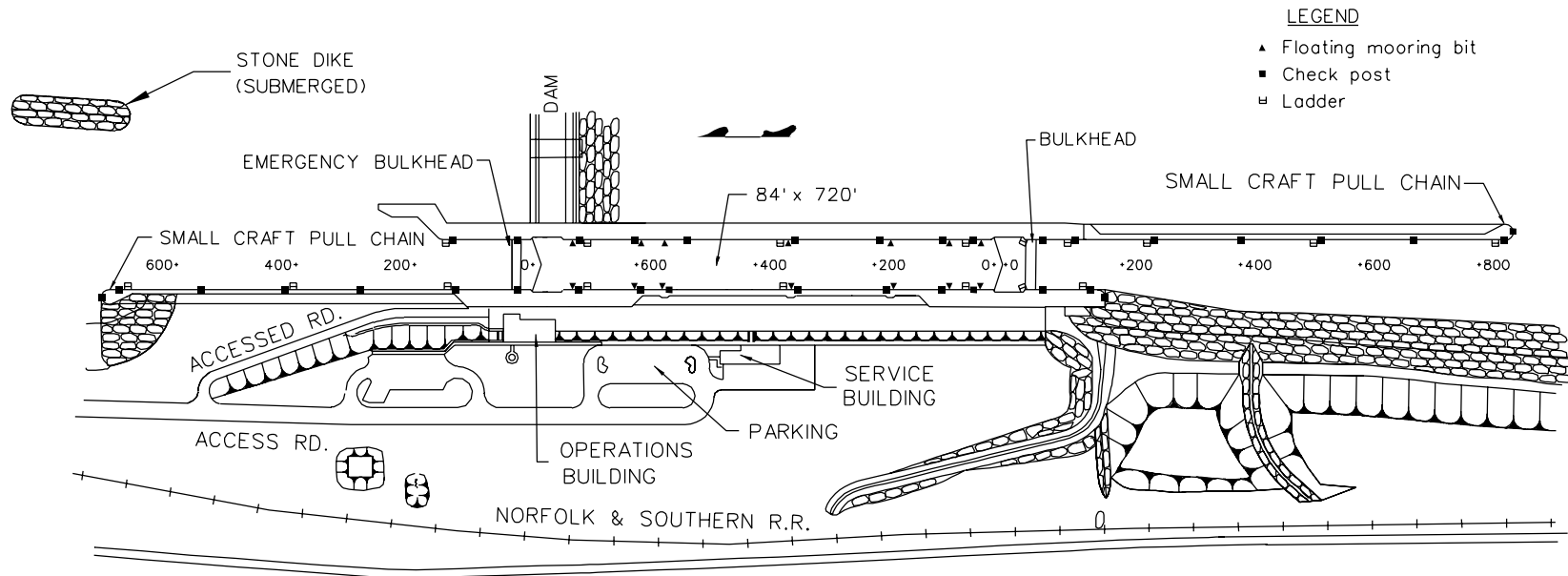
ELEVATIONS LOOKING DOWNSTREAM
MONONGAHELA RIVER CHART 24





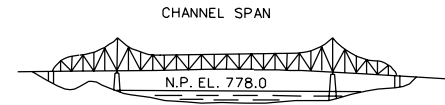
POINT MARION
LOCK & DAM
UPPER POOL EL. 797.0
LOWER POOL EL. 778.0
UPPER GAGE
ZERO EL. 788.0
N.P. READS 9.0'
LOWER GAGE
ZERO EL. 769.0
N.P. READS 9.0'

POINT MARION LOCK & DAM
NAVIGATION SUSPENDED - UPPER GAGE 11.5
TELEPHONE NO. 724-725-5289



AERIAL POWER CROSSINGS

CROSSING	MILE	ELEVATION	CLEARANCE
1	88.6	890.4	112.4'
1	90.1	845.7	67.7'



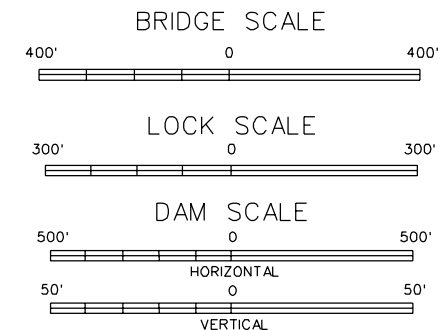
POINT MARION HIGHWAY BRIDGE
CHANNEL SPAN
MILE 89.86

ELEVATION OF LOW STEEL 830.5*
VERTICAL CLEARANCE AT POOL STAGE 52.5*
HORIZONTAL CLEARANCE 450.0'
* MIDDLE 300'

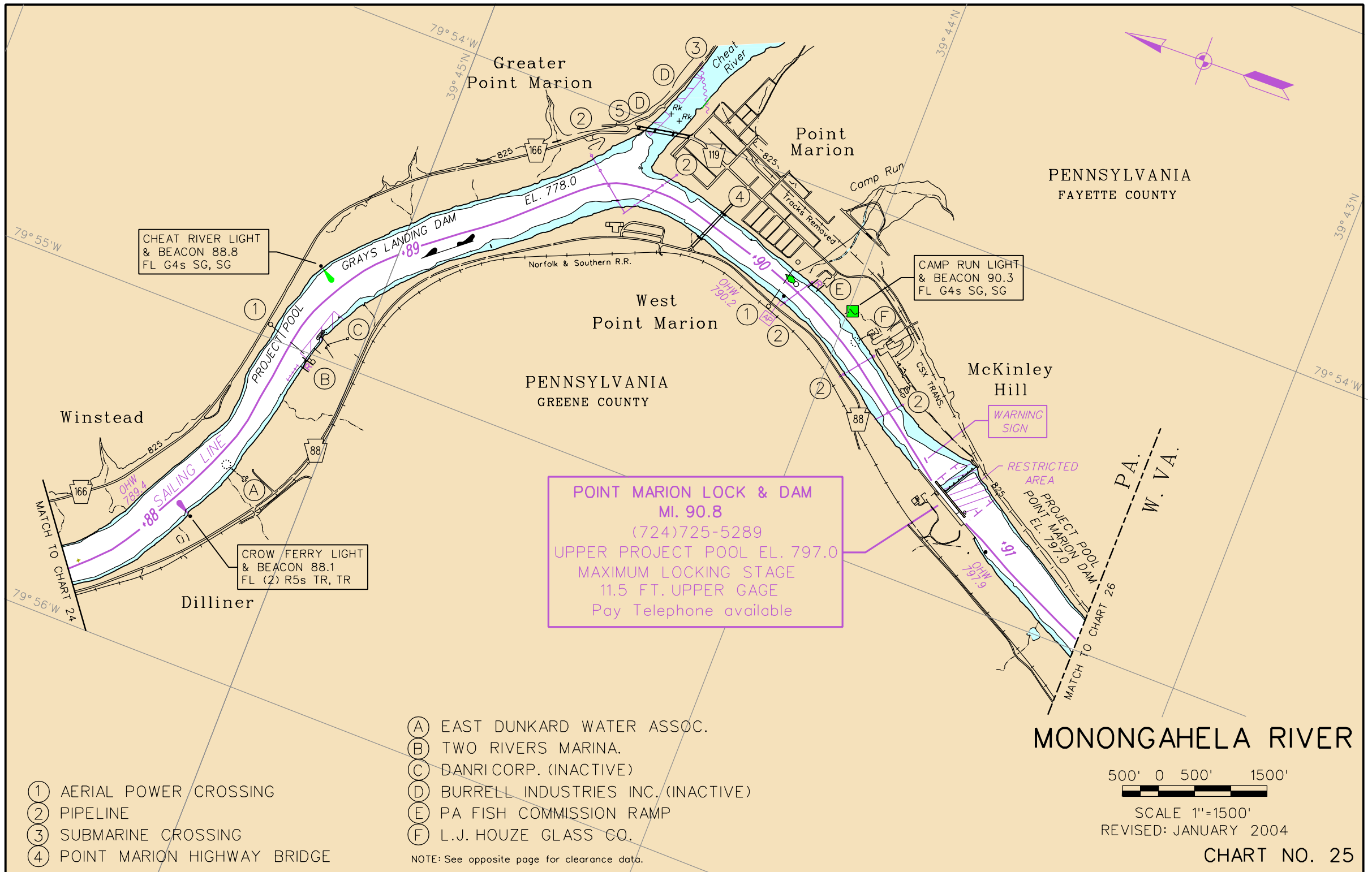


CHEAT RIVER
U.S. ROUTE 119 HIGHWAY BRIDGE
CHANNEL SPAN
MILE 0.1

ELEVATION OF LOW STEEL 805.5+/-
VERTICAL CLEARANCE AT POOL STAGE 27.5+/-
HORIZONTAL CLEARANCE 243.5+/-

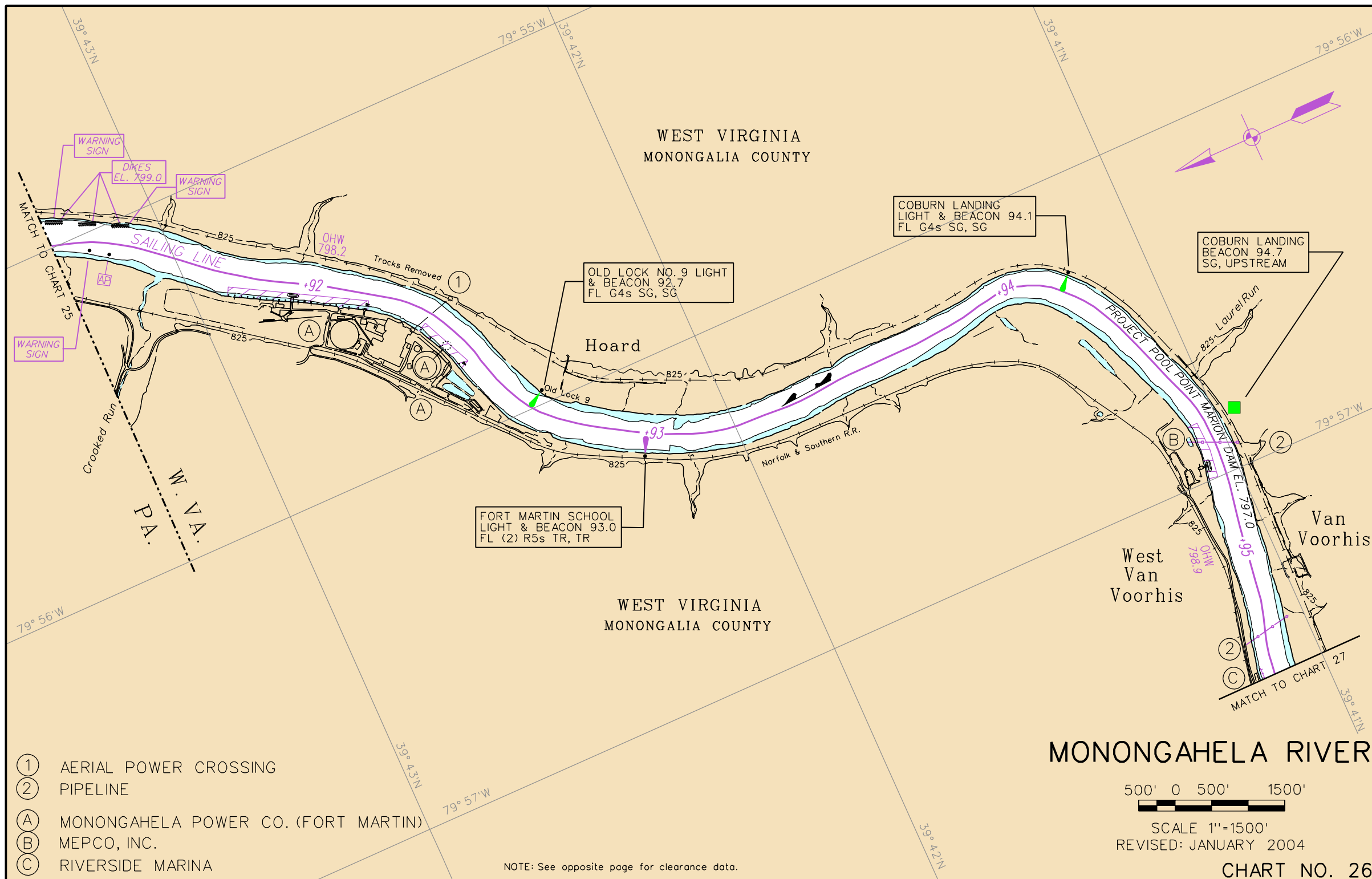


ELEVATIONS LOOKING DOWNSTREAM
MONONGAHELA RIVER CHART 25



AERIAL POWER CROSSINGS

CROSSING	MILE	ELEVATION	CLEARANCE
1	92.3	893.0	96.0'



- ① AERIAL POWER CROSSING
- ② PIPELINE
- (A) MONONGAHELA POWER CO. (FORT MARTIN)
- (B) MEPCO, INC.
- (C) RIVERSIDE MARINA

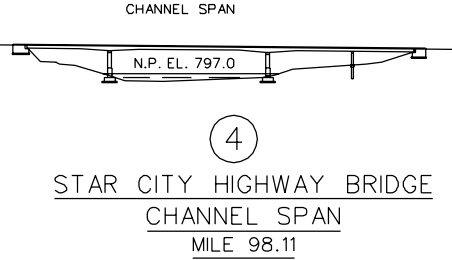
NOTE: See opposite page for clearance data.

MONONGAHELA RIVER

500' 0 500' 1500'

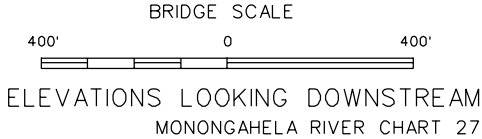
SCALE 1"=1500'
REVISED: JANUARY 2004

CHART NO. 26



ELEVATION OF LOW STEEL 855.25
VERTICAL CLEARANCE AT POOL STAGE 55.4'
HORIZONTAL CLEARANCE 392.0'

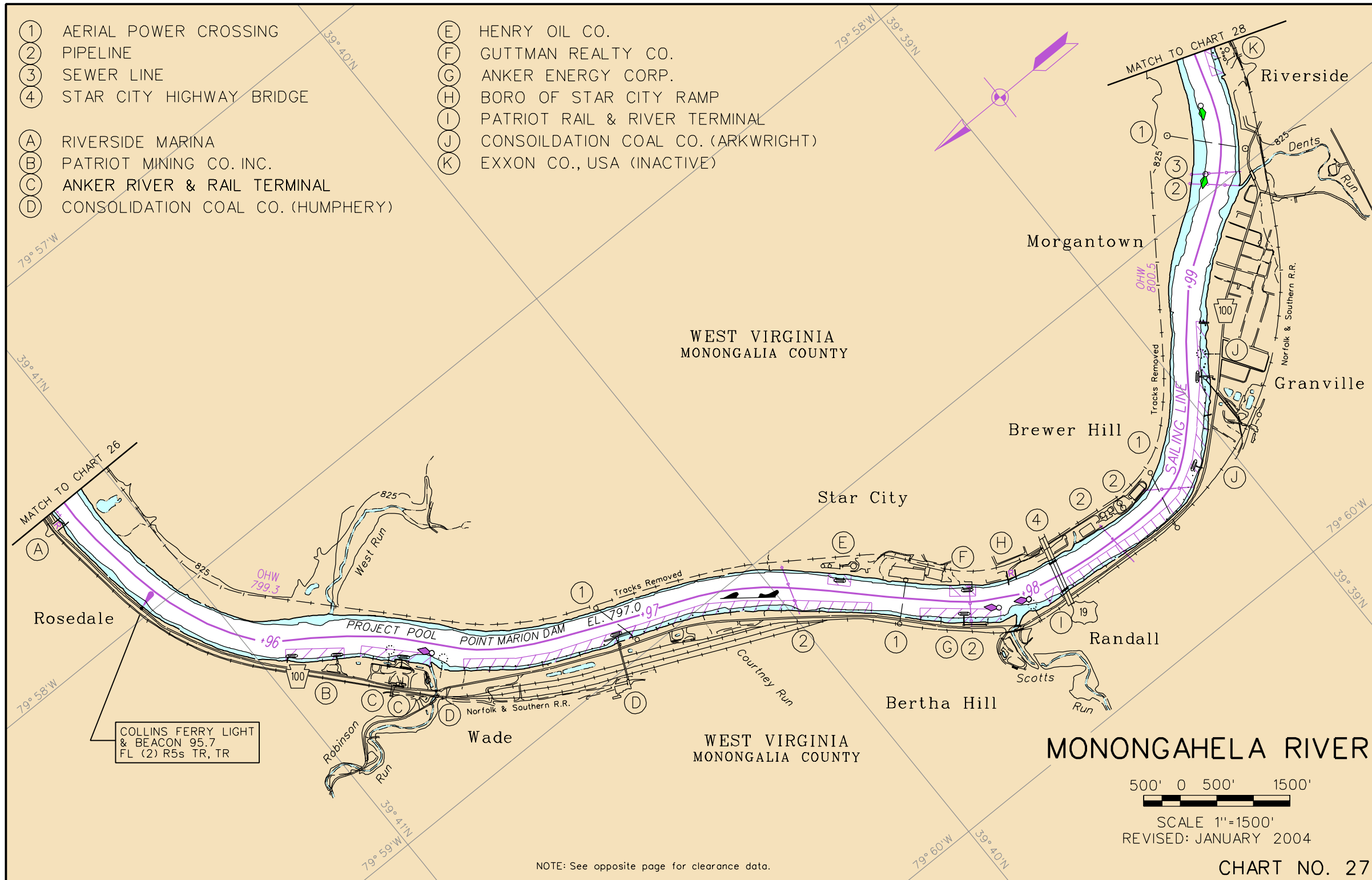
AERIAL POWER CROSSINGS			
CROSSING	MILE	ELEVATION	CLEARANCE
1	96.9	871.0	74.0'
1	97.7	859.9	62.9'
1	98.44	N/A	N/A
1	99.4	859.3	62.3'



- ① AERIAL POWER CROSSING
- ② PIPELINE
- ③ SEWER LINE
- ④ STAR CITY HIGHWAY BRIDGE

- Ⓐ RIVERSIDE MARINA
- Ⓑ PATRIOT MINING CO. INC.
- Ⓒ ANKER RIVER & RAIL TERMINAL
- Ⓓ CONSOLIDATION COAL CO. (HUMPHERY)

- Ⓔ HENRY OIL CO.
- Ⓕ GUTTMAN REALTY CO.
- Ⓖ ANKER ENERGY CORP.
- Ⓗ BORO OF STAR CITY RAMP
- Ⓘ PATRIOT RAIL & RIVER TERMINAL
- Ⓙ CONSOILDATION COAL CO. (ARKWRIGHT)
- Ⓚ EXXON CO., USA (INACTIVE)

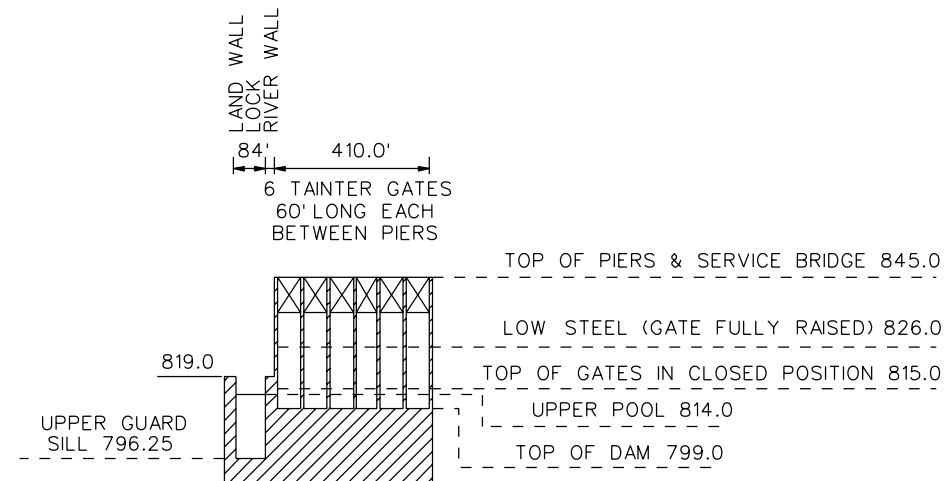


COLLINS FERRY LIGHT
& BEACON 95.7
FL (2) R5s TR, TR

NOTE: See opposite page for clearance data.

500' 0 500' 1500'
SCALE 1"=1500'
REVISED: JANUARY 2004

CHART NO. 27

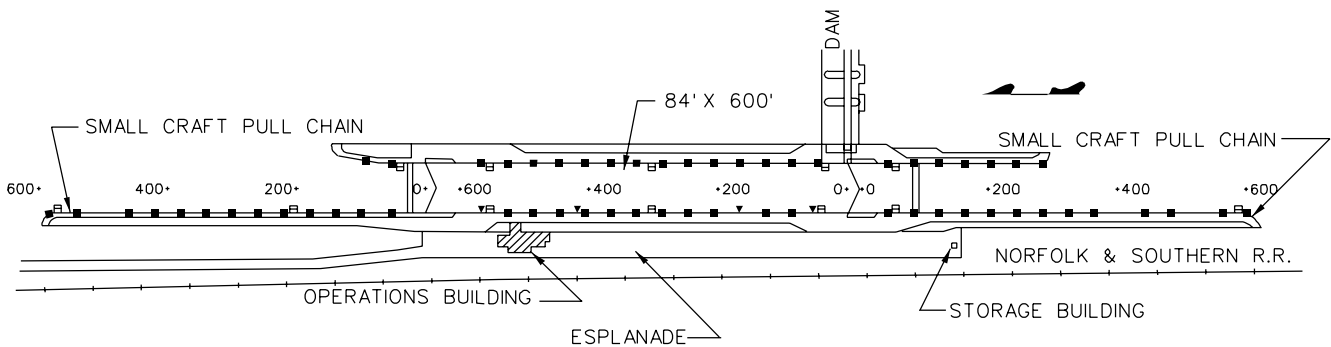


MORGANTOWN LOCK & DAM

NAVIGATION SUSPENDED - UPPER GAGE 12.0

TELEPHONE NO. 304-292-1885

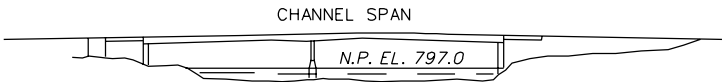
MORGANTOWN LOCK & DAM	
UPPER POOL EL.	814.0
LOWER POOL EL.	797.0
UPPER GAGE	
ZERO EL.	805.1
N.P. READS	9.0'
LOWER GAGE	
ZERO EL.	787.8
N.P. READS	9.0'



- LEGEND
- ▲ Floating mooring bit
 - Check post
 - ▢ Ladder

AERIAL POWER CROSSINGS

CROSSING	MILE	ELEVATION	CLEARANCE
1	102.8	872.7	58.7'

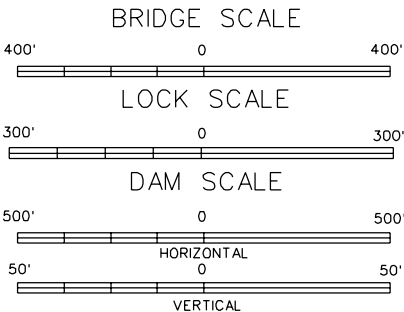


4

MORGANTOWN HIGHWAY BRIDGE CHANNEL SPAN

MILE 101.16

ELEVATION OF LOW STEEL	849.2
VERTICAL CLEARANCE AT POOL STAGE	52.2'
HORIZONTAL CLEARANCE	300.0'

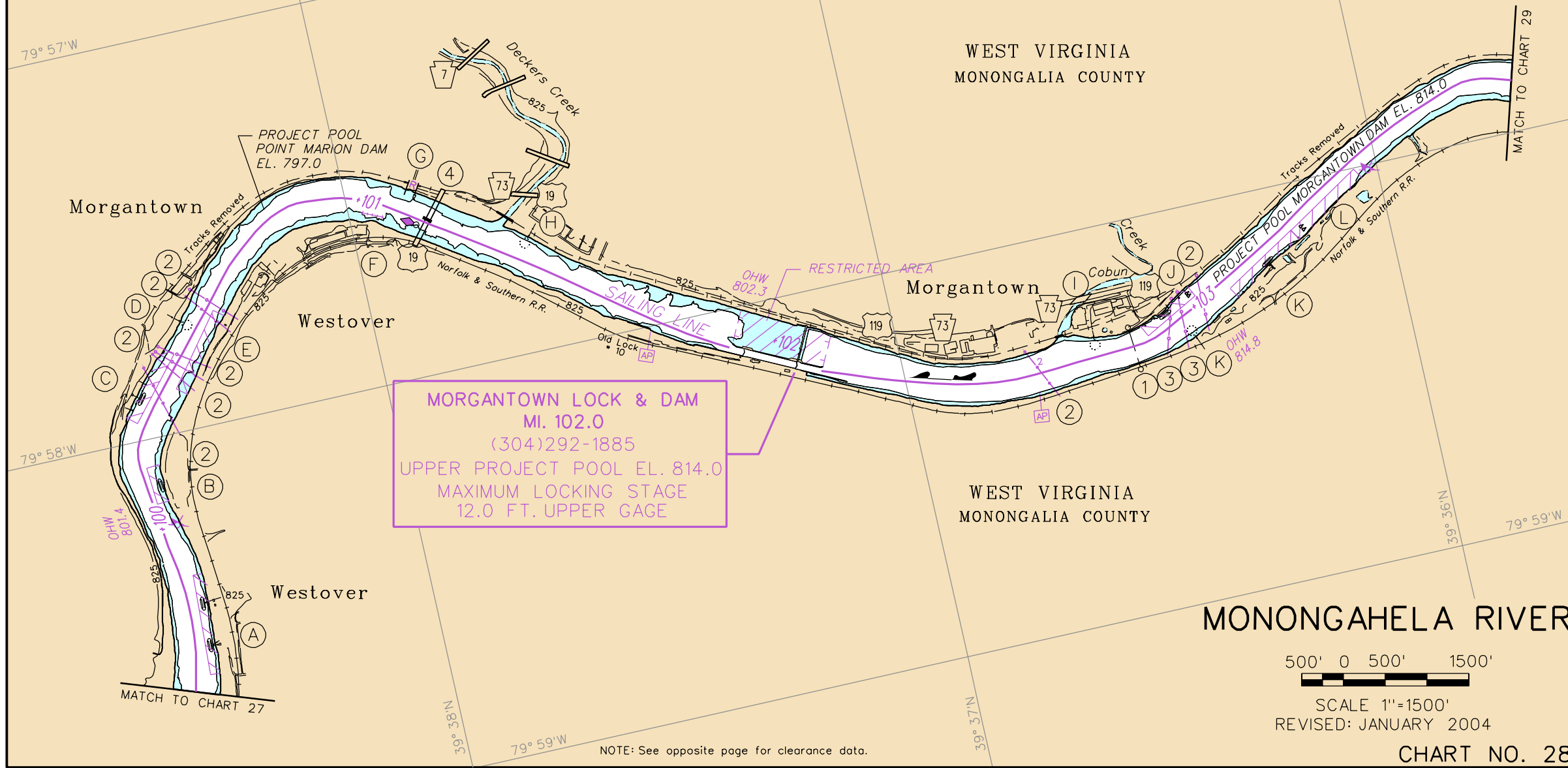


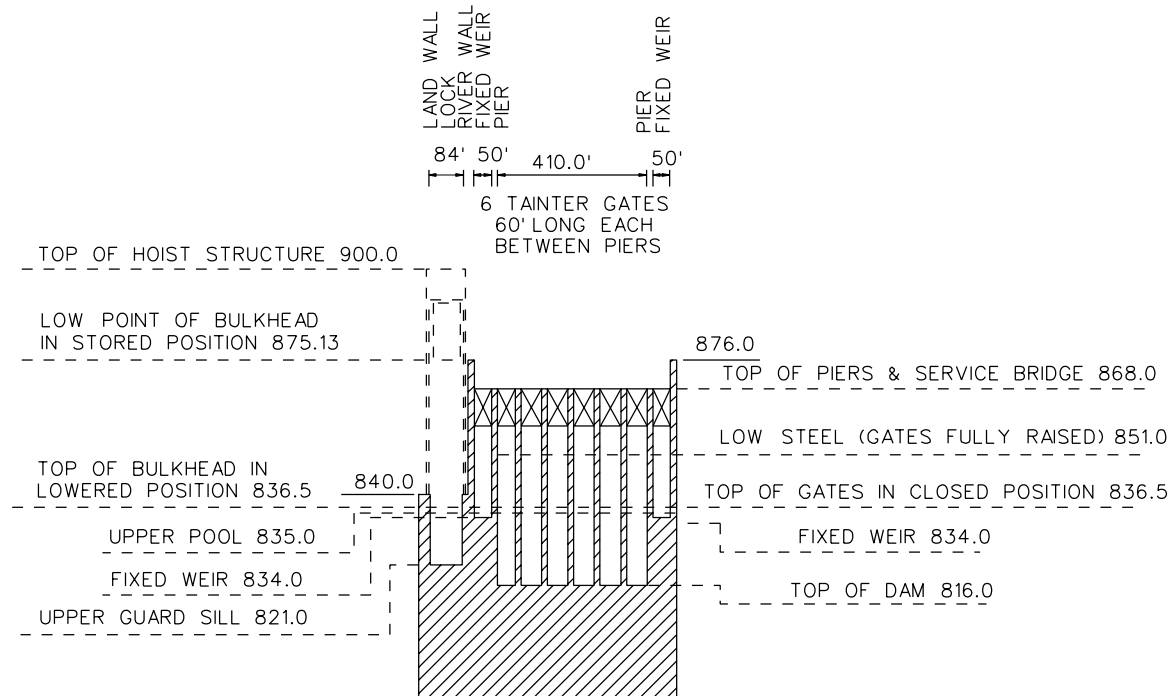
ELEVATIONS LOOKING DOWNSTREAM
MONONGAHELA RIVER CHART 28

- ① AERIAL POWER CROSSING
- ② PIPELINE
- ③ WATER LINE
- ④ MORGANTOWN HIGHWAY BRIDGE

- Ⓐ VANCE COAL CO.
- Ⓑ DARWIN JOHNSON
- Ⓒ GREER LIMESTONE CO.
- Ⓓ MORGANTOWN ENERGY
- Ⓔ CONSOLIDATION COAL CO.
- Ⓕ MORGANTOWN ROWING ASSOC.

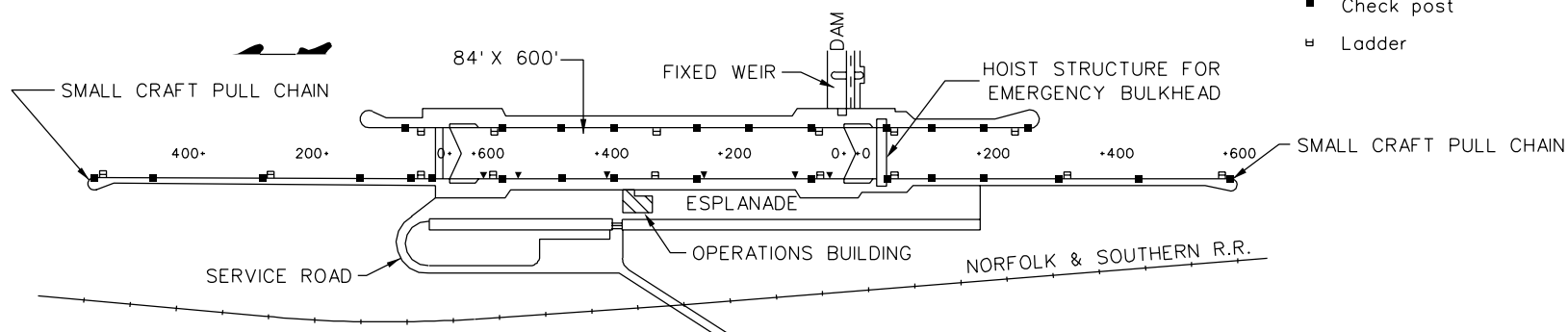
- Ⓖ CITY OF MORGANTOWN
- Ⓗ CSX TRANS.
- Ⓘ MORGANTOWN WATER CO.
- Ⓙ DECKER'S CREEK LIMESTONE CO.
- Ⓚ WEST SIDE RIVER TERMINAL, INC.
- Ⓛ RECYCLE METALS (DOCK INACTIVE)





HILDEBRAND LOCK & DAM
 NAVIGATION SUSPENDED - UPPER GAGE 12.0
 TELEPHONE NO. 304-983-2300

HILDEBRAND
 LOCK & DAM
 UPPER POOL EL. 835.0
 LOWER POOL EL. 814.0
 UPPER GAGE
 ZERO EL. 826.1
 N.P. READS 9.0'
 LOWER GAGE
 ZERO EL. 804.9
 N.P. READS 9.0'

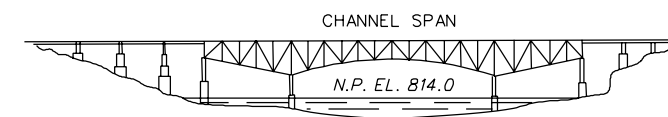


LEGEND

- ▲ Floating mooring bit
- Check post
- ▣ Ladder

AERIAL POWER CROSSINGS

CROSSING	MILE	ELEVATION	CLEARANCE
1	103.9	868.2	54.2'
1	106.2	917.0	103.0'
1	107.9	973.0	159.0'



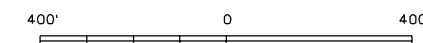
3

INTERSTATE 79 HIGHWAY BRIDGE CHANNEL SPAN

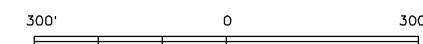
MILE 104.86

ELEVATION LOW POINT OF STEEL 900.0
 VERTICAL CLEARANCE AT POOL STAGE 86.0'
 HORIZONTAL CLEARANCE 460.0'

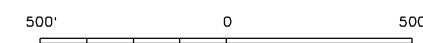
BRIDGE SCALE



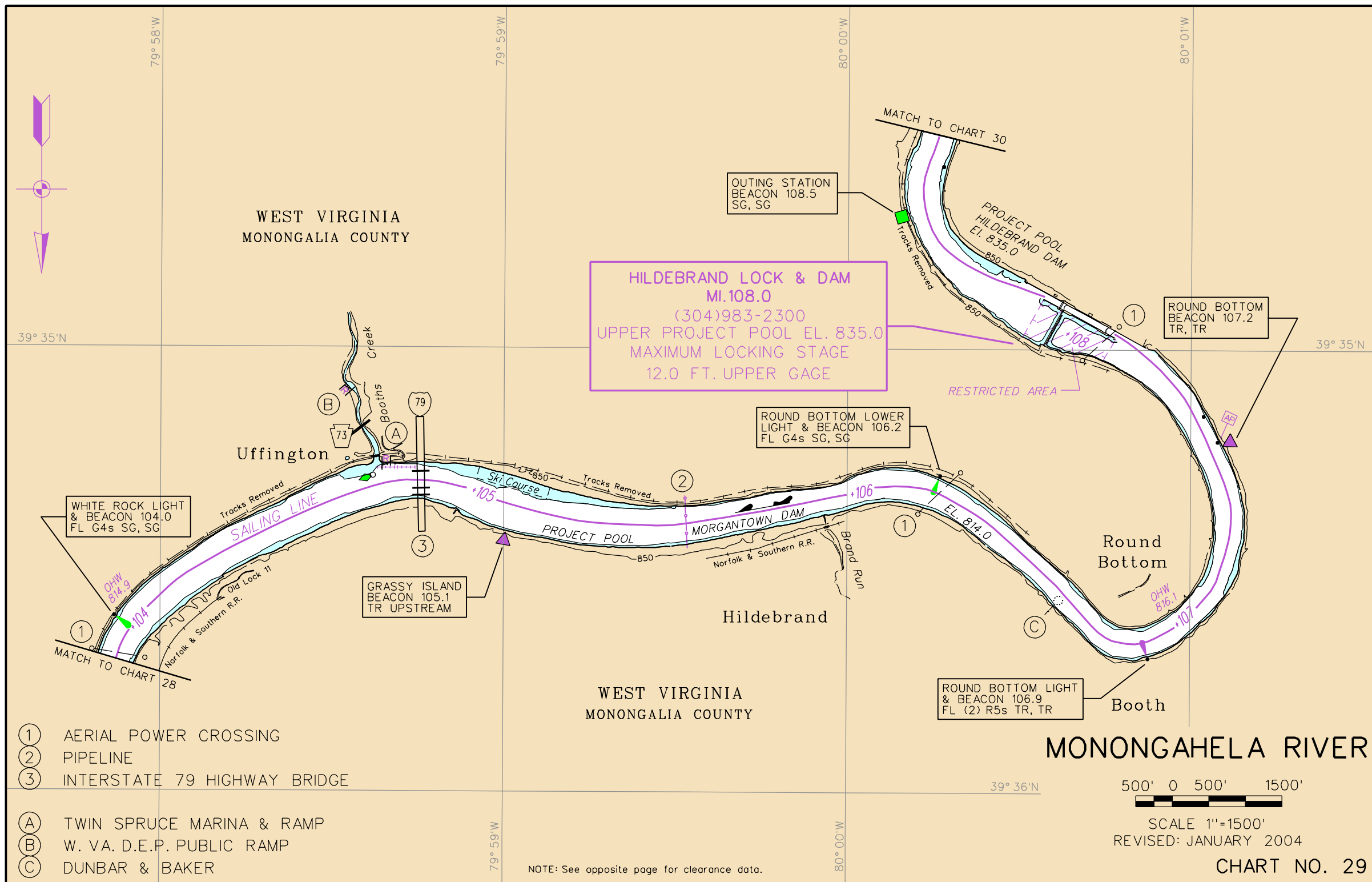
LOCK SCALE

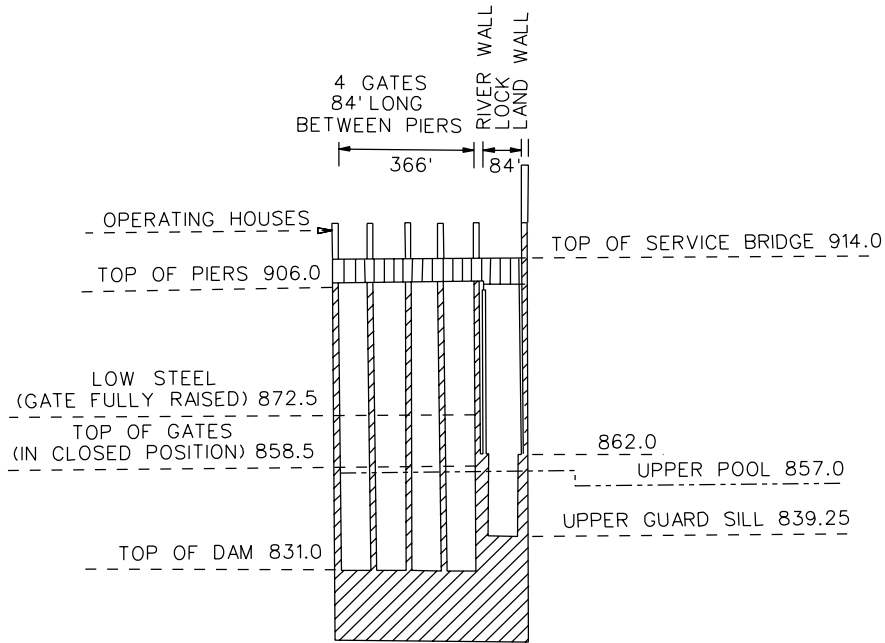


DAM SCALE



ELEVATIONS LOOKING DOWNSTREAM
 MONONGAHELA RIVER CHART 29

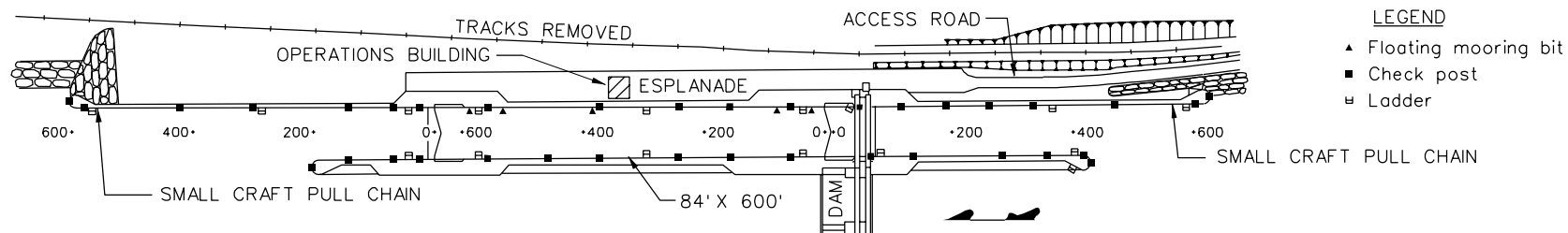




OPEKISKA LOCK & DAM

NAVIGATION SUSPENDED - UPPER GAGE 12.0
TELEPHONE NO. 304-366-4224

OPEKISKA LOCK & DAM	
UPPER POOL EL.	857.0
LOWER POOL EL.	835.0
UPPER GAGE	
ZERO EL.	848.2
N.P. READS	9.0'
LOWER GAGE	
ZERO EL.	826.1
N.P. READS	9.0'

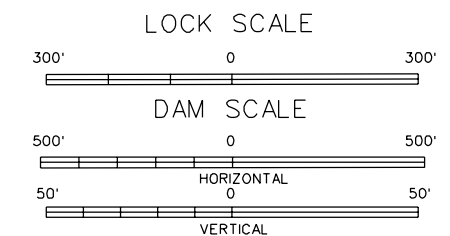


LEGEND

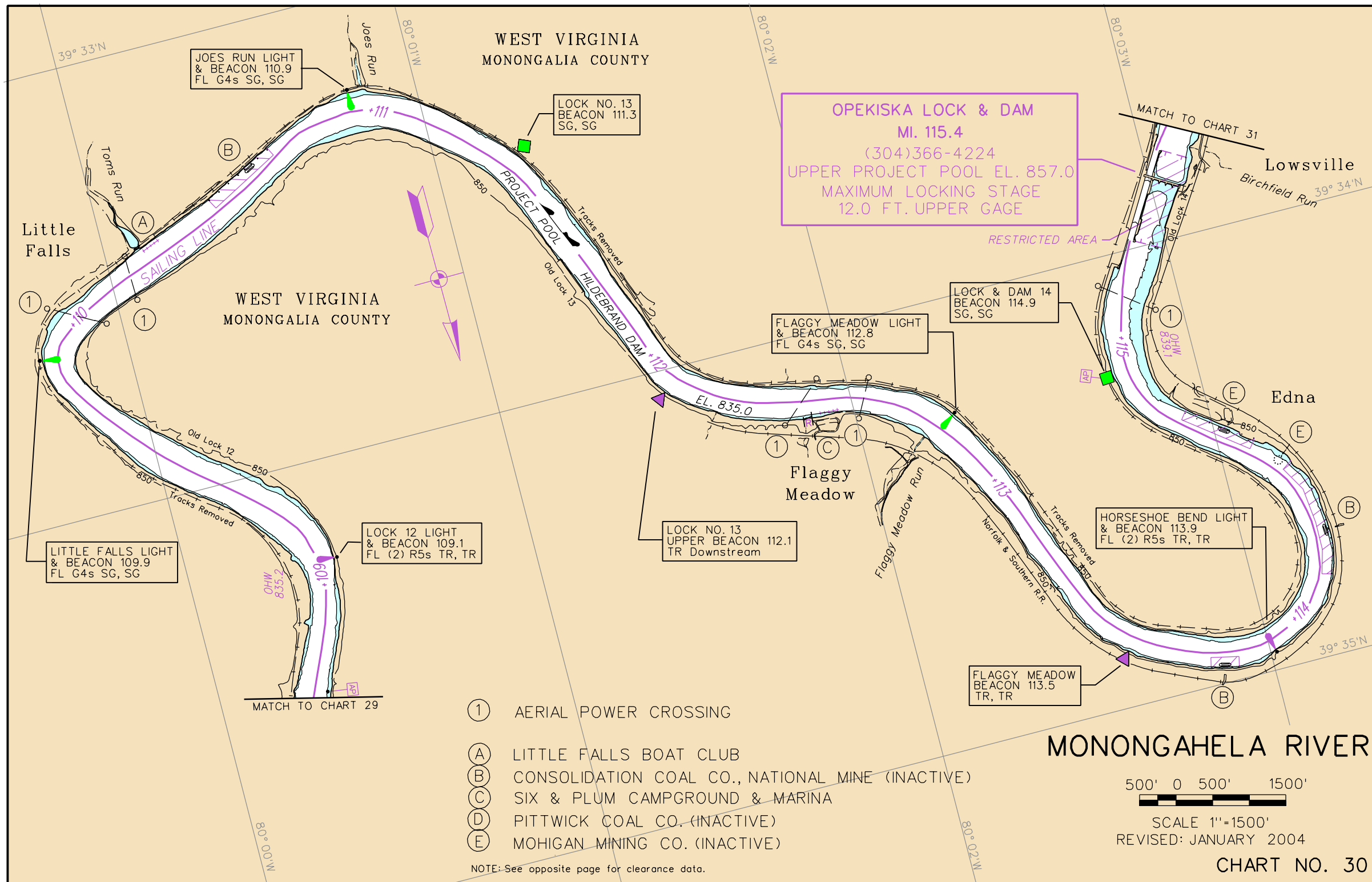
- ▲ Floating mooring bit
- Check post
- ▤ Ladder

AERIAL POWER CROSSINGS

CROSSING	MILE	ELEVATION	CLEARANCE
1	110.0	898.0	63.0'
1	110.2	898.0	63.0'
1	112.3	725.0	90.0'
1	112.5	1062.0	227.0'
1	115.1	920.0	85.0'

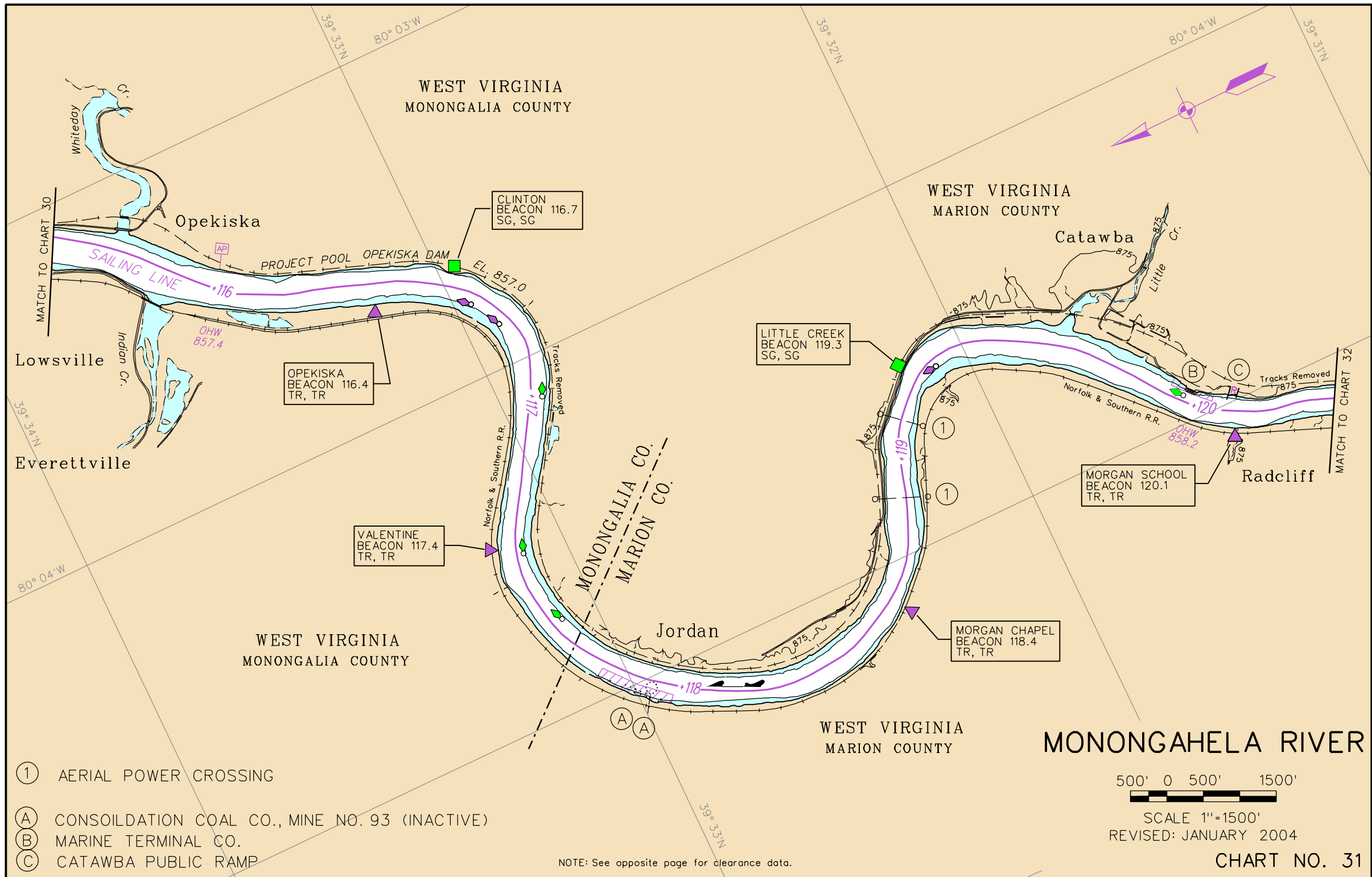


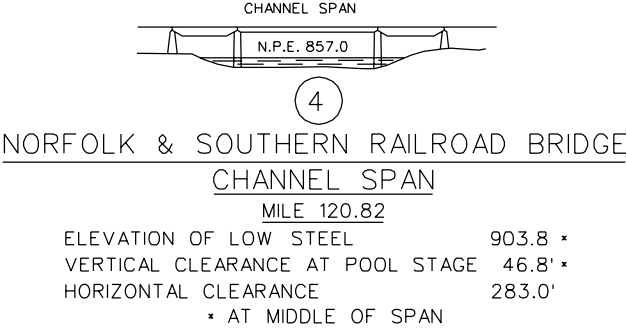
ELEVATIONS LOOKING DOWNSTREAM
MONONGAHELA RIVER CHART 30



AERIAL POWER CROSSINGS

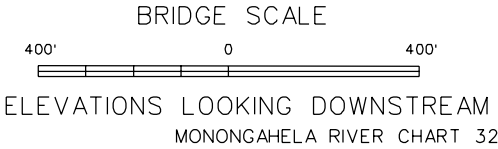
CROSSING	MILE	ELEVATION	CLEARANCE
1	118.9	921.0	64.0'
1	119.1	964.0	107.0'

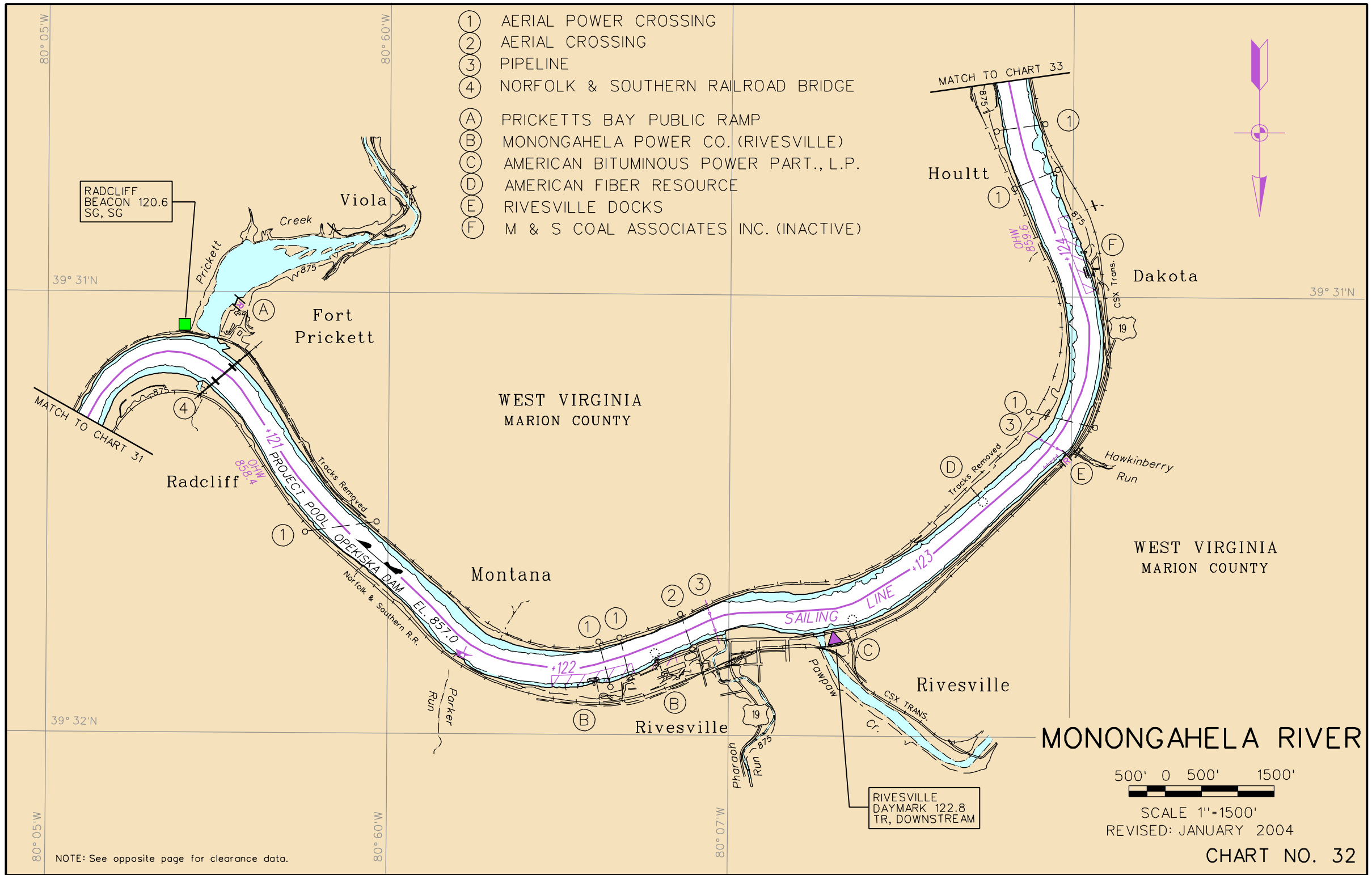


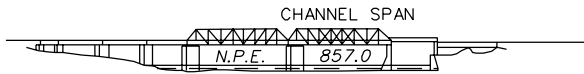


AERIAL POWER CROSSINGS			
CROSSING	MILE	ELEVATION	CLEARANCE
1	121.3	995.0	138.0'
1	122.1	914.3	57.3'
1	123.71	857.0	70.0'
1	124.3	933.0	76.0'
1	124.5	922.0	65.0'

AERIAL CROSSINGS			
CROSSING	MILE	ELEVATION	CLEARANCE
2	122.3	917.6	60.6'



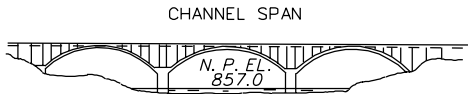




5

CSX TRANS. RAILROAD BRIDGE
CHANNEL SPAN
MILE 124.6

ELEVATION OF LOW STEEL 893.4
VERTICAL CLEARANCE AT POOL STAGE 36.4'
HORIZONTAL CLEARANCE 132.0'



7

FAIRMONT HIGHWAY BRIDGE (OLD)
CHANNEL SPAN
MILE 127.16

ELEVATION OF LOW STEEL 936.0*
VERTICAL CLEARANCE AT POOL STAGE 79.0*
HORIZONTAL CLEARANCE 300.0'
* AT MIDDLE OF SPAN

AERIAL POWER CROSSINGS

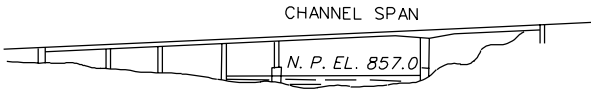
CROSSING	MILE	ELEVATION	CLEARANCE
1	125.1	918.0	61.0'
1	126.0	919.0	62.0'
1	126.8	924.0	67.0'
1	127.0	923.0	68.0'
1	128.2	951.8	94.8'



6

MARION COUNTY HIGHWAY BRIDGE
CHANNEL SPAN
MILE 127.1

ELEVATION OF LOW STEEL 905.8
VERTICAL CLEARANCE AT POOL STAGE 48.8'
HORIZONTAL CLEARANCE 271.0'

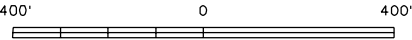


8

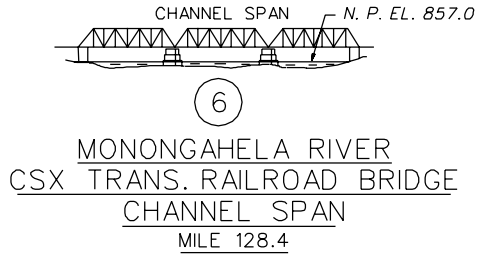
FAIRMONT HIGHWAY BRIDGE (NEW)
CHANNEL SPAN
MILE 127.47

ELEVATION OF LOW STEEL 925.4
VERTICAL CLEARANCE AT POOL STAGE 68.4'
HORIZONTAL CLEARANCE 300.0'

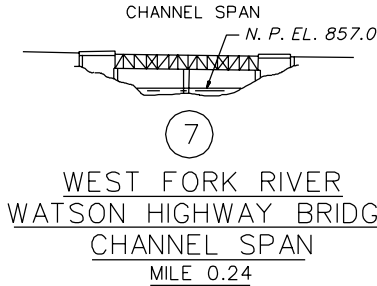
BRIDGE SCALE



ELEVATIONS LOOKING DOWNSTREAM
MONONGAHELA RIVER CHART 33



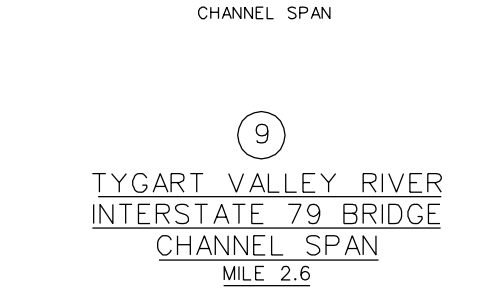
ELEVATION OF LOW STEEL 884.5
VERTICAL CLEARANCE AT POOL STAGE 27.5'
HORIZONTAL CLEARANCE 153.0'



ELEVATION OF LOW STEEL 891.2
VERTICAL CLEARANCE AT POOL STAGE 34.2'
HORIZONTAL CLEARANCE 148.0'

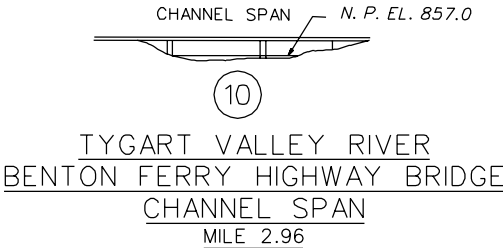


ELEVATION OF LOW STEEL 885.9
VERTICAL CLEARANCE AT POOL STAGE 28.9'
HORIZONTAL CLEARANCE 122.0'
(DRAWING NOT AVAILABLE)



ELEVATION OF LOW STEEL ***
VERTICAL CLEARANCE AT POOL STAGE ***
HORIZONTAL CLEARANCE ***

*** INSUFFICIENT DATA AVAILABLE

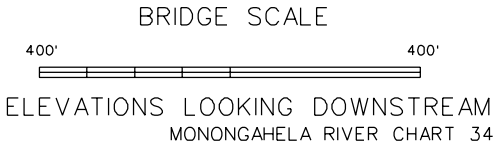


ELEVATION OF LOW STEEL 906.2
VERTICAL CLEARANCE AT POOL STAGE 49.2'
HORIZONTAL CLEARANCE 193.0'

AERIAL POWER CROSSINGS			
CROSSING	MILE	ELEVATION	CLEARANCE
1 *	0.2	914.0	57.0'
1 **	0.3	912.0	55.0'
1 *	0.5	906.6	49.6'
1 *	0.8	906.6	49.6'
1 *	1.6	926.6	69.6'
1 *	2.6	944.0	87.0'

AERIAL CROSSINGS			
CROSSING	MILE	ELEVATION	CLEARANCE
2 *	1.9	916.8	59.8'

* Tygart Valley River
** West Fork River



MONONGAHELA RIVER RIVER TERMINALS

MILE	LOCATION	NAME	COMMODITIES	SHELTER	FACILITIES	RAIL	REMARKS
0.0R	Point, Pittsburgh, PA	City of Pittsburgh Monongahela Wharf	Park	None	None	None	Restricted Public Mooring, No Mooring During Events.
0.0L	Pittsburgh, PA	Consolidation Coal Co./Mon River Towing	Coal	None	None	None	Landing.
0.4L	Pittsburgh, PA	Pitmarine Corp.	Landing, (Wabash Piers)	None	None	None	Landing.
0.6R	Monongahela River Wharf, Pittsburgh, PA	City of Pittsburgh	None	None	None	None	Parking Lot On Wharf.
1.1L	So. Third Street Pittsburgh, PA	S.H. Bell	Sand & Gravel	None	Crane	None	Concrete Bulkhead.
1.4L	So. Eighth Street Pittsburgh, PA	Pioneer Mid-Atlantic, Inc.	Sand & Gravel	None	Whirley Crane	None	Unload Sand & Gravel.
2.2R	Brady Street Yard Pittsburgh, PA	Standard Slag Co.	Sand, Gravel & Coal	None	Crane	None	Concrete Bulkhead.
2.9L	So. 28 th Street Pittsburgh, PA	LTV Steel Co.	Coal	None	Whirley Crane	None	Inactive.
3.4L	So. 28 th Street Pittsburgh, PA	LTV Steel Co.	Miscellaneous	None	50 ton crane	Norfolk & Southern R.R.	Single Barge Dock, Load & Unload Misc. Bulk Materials. Inactive.
3.6R	2nd Avenue Pittsburgh, PA	LTV Steel Co.	Coal	None	None	None	Ice Breakers, Square Steel Mooring Posts. Inactive.
3.8R	2nd Avenue Pittsburgh, PA	LTV Steel Co.	Highway Bridge	None	Crane	None	Steel Sheet Pile Bulkhead. Inactive.
4.0L	2nd Avenue Pittsburgh, PA	LTV Steel Co.		None	Pipelines	Norfolk & Southern R.R.	6" Pipeline. Ice Breakers, 2 Sheet Pile Cells. Inactive.
4.0R	2nd Avenue Pittsburgh, PA	LTV Steel Co.	Tar	None	Crane	Norfolk & Southern R.R.	Steel Pile Mooring Cells. Inactive.
4.1R	Rutherglen Street Pittsburgh, PA	LTV Steel Co.	Coal	None	Barge Unloader, Chute	Norfolk & Southern R.R.	Steel Pile Mooring Cells. Inactive.

MONONGAHELA RIVER
RIVER TERMINALS

MILE	LOCATION	NAME	COMMODITIES	SHELTER	FACILITIES	RAIL	REMARKS
4.2R	2nd Avenue Pittsburgh, PA	LTV Steel Co.	Acid & Light Oil	None	Crane	Norfolk & Southern R.R.	6" Pipeline On Ice Breaker. Inactive.
4.8L	Becks Run, Pittsburgh, PA	Campbell Barge Line Co., Inc.	Landing	None	None	None	2 Embedded Barges.
6.5R	Glenwood, Pittsburgh, PA	CSX Reality	Coal	None	Conveyor To Barge	CSX Trans.	Inactive.
7.5R	9-Mile Run,	CSX Reality	None	None	None	None	Inactive.
9.4R	Rankin, PA	Park Corp. (Development)	None	None	None	None	5 Steel Pile Mooring Cells.
9.7R	Braddock, PA	Josh Steel Co.	Steel & Scrap	None	Crane	None	2 Embedded Barges.
9.8L	Central Wharf	S.H. Bell	Steel & Scrap	None	Crane	Union R.R. - CSX Trans.	Concrete Bulkhead.
9.9R	Braddock, PA	S.H. Bell	Sand & Gravel	None	Crane	None	4 Square Steel Mooring Posts.
10.1R	Braddock, PA	Josh Steel Co.	Steel & Scrap	None	Crane	None	Load & Unload Scrap - Embedded Barges.
10.2R	7th Street Braddock, PA	Arrow Concrete Co.	Sand & Gravel	None	Crane	None	Concrete & Steel Bulkhead.
11.7L	Duquesne, PA	Union Railroad Co.	Fuel Oil	None	None	None	Inactive.
11.8L	Duquesne, PA	Union Railroad Co.	Coal, Spar & Steel	None	River-Rail, Crane	Union R.R.	Barge To Rail. Steel Sheet Pile Bulkhead.
12.3L	Duquesne, PA	Union Railroad Co.	Coal	None	Barge Unloader	Union R.R.	Barge To Rail. 12 Sheet Pile Cells.
12.7L	Duquesne, PA	U.S. Army Corps Of Engineers	Fuel Oil	None	Pipelines	None	6 Square Steel Mooring Posts & Cells.
14.0R	Riverton, PA	S.H. Bell	Sand & Gravel	None	Crane	None	Concrete & Steel Bulkhead. Inactive.
15.0R	McKeesport, PA	Regional Industrial Development Co.	None	None	Crane	Union R.R. - CSX Trans.	Concrete Bulkhead.
15.5R	Youghiogheny River	None					
15.8R	McKeesport, PA	Newmans Landing, Inc.	Dry bulk	None	Crane	None	Barge Dock. Inactive.

MONONGAHELA RIVER RIVER TERMINALS

MILE	LOCATION	NAME	COMMODITIES	SHELTER	FACILITIES	RAIL	REMARKS
15.95L	Dravosburg, PA	Kinder Morgan	Asphalt	None	Pipeline & Pumps	None	Embedded Barges.
16.1L	Dravosburg, PA	Hanson Aggregates	None	None	None	None	Inactive.
16.4L	Dravosburg, PA	Steel City Environmental Services Inc.	Landing	None	None	None	Fleet Mooring.
16.9L	Dravosburg, PA	Steel City Environmental Services Inc.	Landing	None	Crane	None	Company Office. One Steel Pile Cell, 2 Square Cell & Fleet Mooring.
17.3R	Glassport, PA	Stone & Co.	Sand & Gravel	None	Crane	None	Sheet Pile Cell & 4 Square Steel Mooring Posts.
17.3L	Dravosburg, PA	Steel City Environmental Services Inc.	Fleet Mooring	None	None	None	Fleet Mooring.
18.5R	Glassport, PA	Riverview Steel Co.	Steel Products	Covered	Crane	CSX Trans.	Barge Loading.
18.8R	Glassport, PA	Tonomo Marine	Coal	None	Mooring	None	Fleet Mooring. Inactive.
18.8L	Clairton, PA	C & C Marine Maintenance, Inc.	Reserve Coal, Marine Ways.	None	Crane	None	Sheet Steel Bulkhead & Drydock.
19.1R	Glassport, PA	Mon-Valley Transportation Center, Inc.	Misc. Bulk Materials	None	Crane	None	Load & Unload Bulk Materials.
19.2L	Clairton, PA	U.S. Steel Corp.	Coal	None	Conveyor To Barge	None	2 Ice Breakers 14 Sheet Steel Cells.
19.3L	Clairton, PA	Aristech Chemical Corp.	Benzol	None	Pipelines	None	12 Sheet Steel Cells.
19.5R	Glassport, PA	Mon-Valley Transportation Center, Inc.	Coal	None	Conveyor To Barge	None	7 Pipe Pile Clusters.
19.7L	Clairton, PA	U.S. Steel Corp.	Coal	None	Crane	None	Concrete Bulkhead & 3 Mooring Cells.
20.3L	Clairton, PA	U.S. Steel Corp.	Coal & Coke	None	Barge Unloader (2)	None	Concrete Bulkhead & 2 Ice Breakers.
20.7R	Glassport, PA	Marathon Ashland Petroleum L.L.C.	Fuel Oil	None	None	None	Natural Bank.
21.0L	Clairton, PA	U.S. Steel Corp.	Ammonia	None	Pipelines	Union R.R.	6 Sheet Pile Cells.

MONONGAHELA RIVER
RIVER TERMINALS

MILE	LOCATION	NAME	COMMODITIES	SHELTER	FACILITIES	RAIL	REMARKS
21.8R	Wiley Run	Mon River Towing	Barge Landing	None	None	None	Embedded Barges.
22.0R	Wiley Run	Blank Welding	Mooring	None	None	None	None
22.3R	Wylie Station	Blank Welding	Badge Repair	None	Crane, Dry Dock	None	Concrete Bulkhead, 3 H-Beam Clusters, & 5 Mooring Blocks.
22.4L	West Elizabeth, PA	Consolidation Coal Co.	Landing	None	None	None	4 Sheet Pile Mooring Cells.
22.5R	Elizabeth, PA	Consolidation Coal Co.	Coal, Marine Ways	None	None	None	Barge Repairs.
22.6R	Elizabeth, PA	Consolidation Coal Co.	Floating Dry Dock	None	None	None	Floating Dry Dock.
23.2L	West Elizabeth, PA	Consolidation Coal Co.	Coal	None	None	None	Ice Breaker & 14 cells.
23.6L	West Elizabeth, PA	M.M. Schaffer-Clairton, Slag Co.	Sand & Gravel	None	Crane	None	Embedded Barge Dock.
23.8L	West Elizabeth, PA	Eastman Chemical Resins, Inc.	Chemicals	None	None	None	2 Sheet Pile Cells.
24.2L	West Elizabeth, PA	W.J. Dillner Storage Co.	Miscellaneous	Covered Dock	Crane & Chute	None	Sheet Steel Bulkhead.
24.5L	Floreffe, PA	HBC Fleeting	Marine Ways	None	None	None	Barge Repairs.
24.7L	Floreffe, PA	Marathon Ashland Petroleum L.L.C.	Petroleum Products	None	Pipeline & Pumps	None	2 Square Posts & 2 Mooring Cells.
24.9R	Elizabeth, PA	Reserve Coal Properties Co.	Misc. Bulk Materials, Coal	None	Crane, Truck Chute, Conveyor	None	Barge Dock, Bulk Materials.
25.05R	Elizabeth, PA	Consolidation Coal Co.	Mooring	None	None	None	Submerged Concrete Block With Cable To Deadman.
25.1L	Elrama Power Station	Reliant Energy (Elrama)	Coal	None	Hoist	None	Timber Bulkhead. 2 Ice Breakers & 10 Mooring Cells.
25.5R	Pangburn, PA	Consolidation Coal Co.	Mooring	None	None	None	Mooring Buoys.
27.8R	Bunola, PA	Univar Corp.	Chemicals	None	Pipeline & Pumps	CSX Trans.	Sheet Pile Cell & Steel Post.

MONONGAHELA RIVER RIVER TERMINALS

MILE	LOCATION	NAME	COMMODITIES	SHELTER	FACILITIES	RAIL	REMARKS
28.7R	Courtney, PA	Matt Canestrале Contracting Inc.	Barge Repair, Misc. Unload Bulk Materials.	None	Whirley Crane	CSX Trans.	2 Ice Breakers, Ice Breaker & 8 Mooring Cells.
29.0L	Courtney, PA	West Penn Power Co.	Oil	None	Pipeline & Pumps	None	5 Sheet Pile Cells.
29.5L	Courtney, PA	West Penn Power Co.	Coal	None	Hoist & Conveyor	None	Mitchell Plant. 2 Ice Breakers & 15 Mooring Cells.
29.6L	Courtney, PA	Mon View Mining Co.	Coal	None	Chute	None	Inactive.
30.3L	New Eagle, PA	Maple Creek Mining Co.	Coal	None	Crane & Chute	None	Maple Creek Mine. 3 Ice Breakers & Cells.
30.6L	New Eagle, PA	New Eagle Iron & Metal	Scrap	None	None	None	Inactive.
31.3L	Monongahela, PA	Peterson Supply Co.	Sand & Gravel	None	Crane	None	Concrete Bulkhead. Inactive.
32.8L	Monongahela, PA	Monongahela Iron & Materials Co. Inc.	Scrap	None	Whirley Crane	None	Barge Embedded.
33.0L	Monongahela, PA	Cozzi Iron & Steel Co.	Scrap	None	Cranes	Norfolk & Southern R.R. - W. & L.E. R.R.	Barge Dock.
34.3L	Donora, PA	America Carbon & Metals	Coal	None	Conveyor	None	2 Cells. Barge Embedded.
34.7L	Donora, PA	Matt Canestrале Contracting, Inc.	Slag, Salt, Sand & Gravel	None	Crane & Chute Crane	Norfolk & Southern R.R. - W. & L.E. R.R.	Barge Embedded.
35.9L	Donora, PA	IRECO Inc.	Acid	None	Crane	None	Sheet Pile Cell & 3 Square Steel Mooring Posts.
37.3L	Donora, PA	Babcock & Wilcox Co.	Steel	None	Crane	Norfolk & Southern R.R., - W. & L.E. R.R.	3 Square Steel Mooring Posts.
38.3L	Donora, PA	McGrew Welding Co.	Steel Pipe, Lumber Coal, S&G	None	Crane	None	2 Sheet Pile Cells.
38.5R	Monessen, PA	Koppers Inc.	Misc. Bulk Materials	None	Crane	CSX Trans.	Barge Embedded.

MONONGAHELA RIVER
RIVER TERMINALS

MILE	LOCATION	NAME	COMMODITIES	SHELTER	FACILITIES	RAIL	REMARKS
38.9L	Donora, PA	Dredge Docks, Inc.	Dredge Material	None	Crane	Norfolk & Southern R.R.	Barge Embedded.
39.2R	Monessen, PA	Koppers Inc.	Coal	None	Hoist	None	Ice Breaker & 7 Sheet Pile Cells.
39.2R	Monessen, PA	Koppers Inc.	Fuel Oil	None	Pipeline & Pumps	None	3 Square Posts & Sheet Pile Cell.
40.9L	Charleroi, PA	Coastal Oil of NY, Inc.	Asphalt	None	Pipeline & Pumps	None	Old Lock & Dam No. 4.
42.4L	Charleroi, PA	Stone & Co.	Sand & Gravel	None	Crane	None	Steel Cell & 3 Square Steel Mooring Posts.
42.5R	Gibsonston, PA	Three Rivers Marine and Rail Terminal L.L.P.	Scrap Billets Ingots	None	Whirley Crane	None	Steel Pile Cell & 9 Square Steel Mooring Posts.
43.0R	Gibsonston, PA	Three Rivers Marine and Rail Terminal L.L.P.	Scrap Billets Ingots	None	None	None	4 Embedded Barges stacked Two High. 700' Long.
43.0L	Speers, PA	Campbell Transportation	Coal	None	Conveyor, Hopper & Crusher	None	3 Pipe Pile Clusters
43.1L	Speers, PA	Mon River Towing	Landing	None	None	None	Landing.
43.3R	Belle Vernon, PA	Three Rivers Marine & Rail Terminal L.L.P.	Slag, Sand & Gravel, Coal & Salt	None	Crane & Conveyor	CSX Trans.	3 Square Steel Mooring Posts.
43.6L	Speers, PA	Guttman Oil Co.	Petroleum Products	None	Pipeline-Pumps	None	Sheet Pile Cell & 4 Steel Posts.
43.7L	Speers, PA	Mon River Towing	Landing	None	None	None	Office.
44.0L	Dunlevy, PA	Campbell Transport. Co., Inc.	Coal	None	None	None	Landing, 8 Steel Pile Cells.
44.3L	Dunlevy, PA	C & C Marine Maintenance, Inc.	Coal, Fuel Oil, Sand & Gravel	None	Crane	None	Landing, Barge Repairs.
44.8L	Dunlevy, PA	C & C Marine Maintenance, Inc.	Fleeting Area	None	None	None	Landing, Breasting Barges.
45.2R	Fayette City, PA	Luzerne Land Corp. (Westmont Coal)	Coal	None	Conveyor, Hopper & Crusher	None	6 Mooring Cells & 3 Steel Clusters. Inactive.
47.0L	Allenport, PA	Wheeling-Pittsburgh Steel Corp.	Scrap, Finished Products, Fuel Oil.	None	Crane	None	Concrete Wall.

MONONGAHELA RIVER RIVER TERMINALS

MILE	LOCATION	NAME	COMMODITIES	SHELTER	FACILITIES	RAIL	REMARKS
48.2R	Old Colonial Docks	Mon River Towing	Landing	None	None	None	Ice Breakers & Cells. Fleet Mooring.
50.1R	Newell, PA	Welland Chemical, Inc.	Sulphur, Acid	None	Pipeline & Pumps	None	Wooden Icebreakers & 4 Steel Cells. Inactive.
55.7R	Brownsville, PA	Sager Coal Co.	Coal & Coke	None	Conveyor To Barge	None	2 Steel Posts & Concrete Icebreaker. Inactive.
57.3R	Brownsville, PA	Hiller Barge Co.	Landing	None	None	None	Sheet Pile Wall & Icebreaker.
57.7R	Brownsville, PA	Hiller Barge Co.	Marine Ways	None	Crane	None	Barge Construction & Repair.
58.5L	Denbo, PA	Pechin Leasing	Coal, Sand & Gravel	None	Whirley Crane & Conveyor	None	Old Lock & Dam No. 5.
58.8R	Brownsville, PA	HBC Barge	None	None	None	None	Inactive.
58.9R	Brownsville, PA	Consol Docks Inc. (Alica)	Coal	None	Control Tower Rail/Barge	Norfolk Southern R.R.	13 Steel Mooring Cells.
59.5L	Denbo, PA	Dredge Docks Inc.	Dredge Material	None	None	None	3 Barges wide. Dock 575' Long.
62.6L	Karen Mine	Mon River Dock Co.	Coal	None	Conveyor	None	8 Steel Mooring Cells & Icebreaker.
63.1R	Vesta, PA	Matt Canestrone Contracting, Inc.	Coal, Bulk Commodities	None	Barge Unloader & Crane	None	Dock 4000' Long, Inactive.
63.9R	Fredericktown, PA	Fredericktown Ferry	Cable ferry	None	Cable	None	Hours Of Operation 0600-1800 hrs - 5 Days A Week.
65.4L	Fredericktown, PA	E.C. Mark	Sand & gravel	None	Conveyor	None	Inactive.
66.5R	East Millsboro, PA	Luzerne Coal Corp.	Coal	None	Conveyor To Barge	None	Steel Mooring Cells Dock 1000'. Inactive.
67.0L	Greene County, PA	Cyprus River Processing Corp.	Coal	None	Conveyor	None	8 Steel Pile Mooring Cells.
69.2L	Dilworth Mine	Consolidation Coal Co.	Coal	None	Conveyor	None	Steel Mooring Cells Dock 2500'. Inactive.
70.2L	Crucible, PA	Consolidation Coal Co.	Coal	None	None	None	Inactive.

MONONGAHELA RIVER
RIVER TERMINALS

MILE	LOCATION	NAME	COMMODITIES	SHELTER	FACILITIES	RAIL	REMARKS
71.8R	Isabella, PA	Global Coal Recovery Corp. Weirton Steel Div.	Coke	None	Conveyor	None	8 Steel Mooring Cells & Icebreaker. Inactive.
76.5L	Nemacolin, PA	Nemacolin Mines Corp.	None	None	None	None	5 Steel Mooring Cells & Icebreaker. Inactive.
77.6R	Ronco, PA	Duke Energy	Coal	None	None	None	Only Dock Remains.
78.5L	Hatfield Power Station	West Penn Power Co.	Coal	None	Continuous Unloader	None	Steel Mooring Cells & Ice Breakers. Dock 4800'
80.5L	Robena Mine	Consolidation Coal Co.	Coal	None	Continuous Unloader	None	Steel Mooring Cells & Ice Breakers. Dock 2400' .
81.5L	Cumberland Mine	U.S. Steel Mining Co., Inc.	Coal	None	Continuous To Barge	Union RR	Steel Mooring Cells. Dock 3000'.
82.2L	Grays Landing	L & J Equipment Co.	Coal	None	Conveyor	None	Formerly Hillman Coal & Coke Corp. - Alicia #2. Inactive.
83.0L	Warwick Mine	New Warwick Mining, Co.	Coal	None	Hoist	None	Steel Mooring Cells & Ice Breakers. Dock 1200'.
86.0L	Smithfield, PA	Dunkard Mining Co.	Coal	None	Conveyor	None	Formerly Valley Camp Coal Co., Maiden Mine.
86.3L	Poland, PA	Chess Coal Co.	Coal	None	Conveyor, Hopper, Crusher	None	5 Pipe Pile Clusters.
86.7L	Poland, PA	Greenwood Development, Inc.	Coal	None	Conveyor	None	Mooring Cells & Icebreaker. Inactive.
87.2R	Old Lock No. 8	Gallatin Fuels	Coal, Sand	None	Crane	None	5 Pipe Pile Clusters.
87.4R	Winstead, PA	Gallatin Fuels	Coal	None	Conveyor, Hopper, Crusher	None	Steel Mooring Cells. Dock 1200'.
88.6L	Point Marion, PA	Danri Corp.	Coal	None	Conveyor, Hopper, Crusher	None	5 Steel Mooring Cells & 2 Steel Posts. Inactive.
89.62R	CHEAT RIVER (See Sheet 10)						

MONONGAHELA RIVER RIVER TERMINALS

MILE	LOCATION	NAME	COMMODITIES	SHELTER	FACILITIES	RAIL	REMARKS
92.0L	Fort Martin Power Station Co.	Monongahela Power Co.	Coal	None	Bucket Unloader	None	Steel Mooring Cells & Ice Breakers. Dock 2000'. Upper Dock 700'.
94.8L	West Van Voorhis, WV	MEPCO, Inc.	Coal	None	Conveyor, Hopper, Crusher	None	8 H-Beam Cluster.
96.0L	Rosedale, WV	Patroit Mining, Co. Inc.	Coal	None	2 Conveyors	None	7 Steel Clusters.
96.3L	Maidsville, WV	Anker River & Rail Terminal	Coal	None	Conveyor To Barge	None	2 Square Posts & Sheet Pile Wall.
96.9L	Maidsville, WV	Consolidation Coal Co.	Coal	None	Conveyor	None	Humphery Nine. Steel post & Cells Dock 3800'.
97.5R	Star City, WV	Henry Oil Co.	Petroleum Products	None	Pipelines	None	2 Pipe Pile Clusters.
97.8R	Star City, WV	Guttman Realty Co.	Petroleum Products	None	Pipelines	None	2 Steel Cells.
97.8L	Star City, WV	Anker Energy Corp.	Coal	None	Conveyor, Hopper & Crusher	None	8 Pipe Pile Clusters.
98.05L	Star City, WV	Patriot Rail & River Terminal	Coal	None	None	Norfolk Southern R.R.	2 Cells.
98.1L	Star City, WV	Consolidation Coal Co.	None	None	None	None	Fleeting Area.
98.3L	Star City, WV	Consolidation Coal Co.	None	None	None	None	Empty Barge Storage
98.7L	Granville, WV	Consolidation Coal Co.	Coal	None	Conveyor	None	Arkwright Mine.
99.6L	Riverside, WV	Exxon Co. USA	None	None	None	None	Inactive.
99.8L	Westover, WV	Vance Coal Co.	Coal	None	2 Conveyors	None	Breasting Barges.
100.1L	Westover, WV	Darwin Johnson	Bulk Commodities	None	Crane	None	Barge Embedded.
100.3R	Westover, WV	Greer Limestone Co.	Limestone	None	Conveyor &, Truck Chute	None	6 Sheet Pile Cells.
100.4L	Westover, WV	Consolidation Coal Co.	None	None	None	None	Empty Barge Storage.

MONONGAHELA RIVER
RIVER TERMINALS

MILE	LOCATION	NAME	COMMODITIES	SHELTER	FACILITIES	RAIL	REMARKS
102.9R	Morgantown, WV	Decker's Creek Limestone Co.	Limestone	None	Cranes	None	7 Sheet Pile Cells & Icebreaker.
103.2L	Westover, WV	West Side River Terminal Inc.	Coal	None	Crane & Conveyor To Barge	None	Morgantown Ordinance Works.
103.3L	Westover, WV	Recycle Metals	None	None	None	None	2 Ice Breakers. Inactive.
110.5R	Little Falls, WV	Consolidation Coal Co.	None	None	Conveyor To Barge	None	8 Cells. Inactive.
113.7L	Edna, WV	Consolidation Coal Co.	None	None	Conveyor To Barge	None	4 Pipe Pile Clusters. Inactive.
114.2L	Brady, WV	Consolidation Coal Co.	Coal	None	Conveyor To Barge	None	9 Pipe Pile Clusters.
114.6L	Brady, WV	Mohigan Mining Co.	Coal	None	Chute &, Conveyor To Barge	None	8 Pipe Pile Clusters. Inactive.
117.9L	Mine 93, Jorden, WV	Consolidation Coal Co.	None	None	None	None	Ice Breaker & Cells. Inactive.
120.0R	Catawba, WV	Marine Terminal Co.	Dry Bulk	None	None	None	Embedded Barges.
122.0L	Rivesville, WV	Monongahela Power Co.	Coal	None	Crane	CSX Trans.	Cells. Inactive.
124.0L	Fairmont, WV	M & S Coal Associates Inc.	Coal	None	Conveyor To Barge	None	6 Pipe Pile Clusters. Inactive.
124.6R	Fairmont, WV	Marion Docks Inc.	Coal	None	Conveyor	None	Concrete Wall. Inactive.
127.4R	Fairmont, WV	May Brothers	Cement	None	Crane	None	2 Sheet Pile Cells. Inactive.
127.8L	Fairmont, WV	Standard Oil Co.	Petroleum Products	None	None	None	3 Sheet Pile Cells. Inactive.
127.8R	TYGART RIVER	None					
128.7L	WEST FORK RIVER	None					
	CHEAT RIVER Mile 89.62	None					
0.1R	Point Marion, PA	Burrel Industries Inc.	Coal	None	Hopper To Barge	None	Inactive.
0.4R	Point Marion, PA	Burrel Industries Inc.	Coal	None	None	None	Inactive.

**MONONGAHELA RIVER
SMALL BOAT HARBORS, RAMPS, LANDING, ETC.**

MILE	FACILITY & ADDRESS	PHONE NO.	FUEL	REST.	GROCERIES	O'NIGHT MOORING	LODGING	REMARKS
0.2R	Monongahela Wharf	None	No	No	No	No	No	Restricted Public Mooring, No Mooring During Events.
0.2L	Gateway Clipper Inc. Station Square Dock Pittsburgh, PA 15219	412-355-7980	No	No	No	No	No	Boat Excursions.
0.7R	City of Pittsburgh Pittsburgh, PA	None	No	No	No	No	No	Public Ramp.
2.2L	City of Pittsburgh	None	No	No	No	No	No	Public Ramp.
6.2L	Sandcastle 1000 Sandcastle Dr. W. Homestead, PA 15120	412-462-6666	No	Yes	No	Yes	No	Water Slides, Pool.
8.5L	Park Corp. (Development)	None	No	No	No	No	No	
10.9R	Braddock Boro	None	No	No	No	No	No	Public Ramp.
15.5R	YOUGHIOGHENY RIVER (see sheet 17)							
15.8R	Mon. Valley Speedboat Club 312 Kent St. McKeesport, PA 15130	412-678-9802	Yes	Yes	No	Yes	No	
22.8L	T.C. I. Ramp	None	No	No	No	No	No	Inactive.
22.8R	Elizabeth Boat Club 119 Mt. Vernon Dr. McKeesport, PA 15132	412-384-9737	No	No	No	Yes	No	Groceries nearby, Ramp.
22.9R	Bailey's Bait Dock 221 Water St. Elizabeth, PA 15037	412-384-4906	No	Yes	No	No	No	Fishing supplies, bait & Ice. Inactive.
23.0R	Elizabeth Riverfront Park	None	No	No	No	No	No	Entertainment.
23.2R	PA Fish Commission	None	No	No	No	No	No	Public Ramp.

**MONONGAHELA RIVER
SMALL BOAT HARBORS, RAMPS, LANDING, ETC.**

MILE	FACILITY & ADDRESS	PHONE NO.	FUEL	REST.	GROCERIES	O'NIGHT MOORING	LODGING	REMARKS
26.3R	Dot & Sandy Lighthouse Box 349 Bunola, PA 15020	412-860-6264 412-384-2110	No	No	No	Yes	No	
26.4R	Pine Run Outboard Club c/o 207 Sylvan St. West Mifflin, PA 15122	Not Available	No	No	No	No	No	Launching Ramp, Campground.
26.5R	Boaterz Extreame P.O. Box 264 Bunola, PA 15020	412-384--9386	Yes	No	No	Yes	No	Private Club. Ramp.
27.5R	Sloan's Carousel Marina P.O. Box 313 Elizabeth, PA 15037	412-384-4109	Yes	Yes	No	No	No	Ramp.
29.0R	Molnar's Marina Bunola Rd. Elkhorn, PA 15020	412-384-3442	No	No	No	Yes	No	Ramp, Campground & Winter Storage.
30.1L	Borough of New Eagle	None	No	No	No	No	No	Public Ramp.
30.7L	Beach Club Marina 124 South Union St. New Eagle, PA 15067	724-258-2088	Yes	Yes	No	Yes	No	Ramp, Ice, Snack Bar & Fishing Supplies.
31.9L	Monongahela Mariners Boat Club 4th Street Monongahela, PA 15063	724-258-6347	No	No	No	Yes	No	
31.9L	Monongahela City Aquatorium	None	No	No	No	No	No	Public Use.
31.9L	Monongahela Public Ramp	None	No	No	No	No	No	Public Ramp.
32.1R	Monteray Restaurant & Marina 136 Bunola River Rd. Monongahela, PA 15063	724-258-2300	Yes	Yes	No	No	Yes	Ramp, restaurant.

**MONONGAHELA RIVER
SMALL BOAT HARBORS, RAMPS, LANDING, ETC.**

MILE	FACILITY & ADDRESS	PHONE NO.	FUEL	REST.	GROCERIES	O'NIGHT MOORING	LODGING	REMARKS
32.15R	Edsel & Harriett 13 Edsel Lane Monongahela, PA 15063	724-258-8892	No	No	No	Yes	No	Repairs & Ramp.
32.7L	Johnny's Marine Service 88 Factory St. Monongahela, PA 15063	724-258-2760	No	No	No	No	No	Marine Services & Ramp
33.15L	Monongahela Public Ramp PA Fish Commission	Not Available	No	No	No	No	No	Parking & Ramp.
33.8R	Dana J. Dolfi P.O. Box 38 Webster, PA 15087	724-379-8637	No	No	No	No	No	Dock (Embedded Barge).
36.4L	Boro of Donora	None	No	No	No	No	No	EMERGENCY RAMP ONLY.
34.1R	Forward Twp Public Ramp	None	No	No	No	No	No	Public Ramp (Paved).
34.3R	Barcord's Marina	None	No	No	No	No	No	
36.4R	Webster Boat Club P.O. Box 111 Webster, PA 15087	724-379-7505	No	No	No	No	Yes	Private Club.
36.4L	Boro of Donora Emergency Ramp	None	No	No	No	No	No	EMERGENCY RAMP ONLY.
36.4R	Rostraver Twp. Public Ramp	None	No	No	No	No	No	Public Ramp.
38.5R	Redevelopment Auth. of Westmoreland Co.	None	No	No	No	No	No	Not Paved.
41.1L	Charleroi Public Ramp	None	No	No	No	No	No	Public Ramp.
42.3L	Charleroi Public Ramp	None	No	No	No	No	No	Public Ramp (Paved).

MONONGAHELA RIVER **SMALL BOAT HARBORS, RAMPS, LANDING, ETC.**

MILE	FACILITY & ADDRESS	PHONE NO.	FUEL	REST.	GROCERIES	O'NIGHT MOORING	LODGING	REMARKS
43.3L	Bridgeview Marina 14 Speer St. Speers, PA 15012	724-483-3685	No	No	No	No	No	
43.3L	Smittys Marina 119 River Rd. Speers, PA 15012	724--483-7333	Yes	Yes	No	Yes	No	Service
43.4L	Speers Public Ramp PA Fish Commission	None	No	No	No	No	No	Ramp
43.4L	Speers Boat Club 120 River Rd. Speers, PA 15022	724-483-6161	No	No	No	No	No	Private Club
45.6R	Niomi Athletic Club R.D. #1 Niomi, PA 15488	724-326-4301	No	No	No	No	No	Private Club
46.0L	Marina On The Mon P.O. Box 711 Greensburg, PA 15601	724-837-5151	Yes	Yes	No	Yes	No	Ramp
46.1R	Fayette City Boat Club 500 Connellsville St. Fayette City, PA 15438	724-326-4543	No	No	No	No	No	Ramp
48.5L	Public Ramp	None	No	No	No	No	No	Public Ramp (Not Paved)
49.2L	Darby's Pub & Marina 1st & Lincoln St. Roscoe, PA 15434	724-938-2737	No	Yes	No	Yes	No	
51.1L	Coal Center Public Ramp	None	No	No	No	No	No	
51.25L	California Boat Club Box 287 Coal Center, PA 15423	724-938-9913	No	Yes	No	Yes	No	
51.1L	Coal Center Public Ramp	None	No	No	No	No	No	

**MONONGAHELA RIVER
SMALL BOAT HARBORS, RAMPS, LANDING, ETC.**

MILE	FACILITY & ADDRESS	PHONE NO.	FUEL	REST.	GROCERIES	O'NIGHT MOORING	LODGING	REMARKS
51.8L	California Public Ramp	None	No	No	No	No	No	Public Ramp
55.2L	American Legion Post 940	None	No	No	No	No	No	Ramp
55.5L	A.B. Marina 500 Midd St. W. Brownsville, PA 15417	724-785-8693	Yes	No	No	No	No	Ramp
55.9L	McDonald's Marina Box 143 W. Brownville, PA 15417	724-785-1297	No	No	No	No	No	
55.95L	Public Ramp	None	No	No	No	No	No	Not Paved
56.0L	Public Ramp	None	No	No	No	No	No	Ramp
57.4L	Joe Impiccini	None	No	No	No	No	No	Inactive
58.8L	Pechin's Denbo Marina P.O. Box 341, Main St. Denbo, PA 15429	724-785-6587	Yes	Yes	No	Yes	No	Ramp
63.0L	Overtime On The Mon Rt. 88 Fredericktown, PA 15333	724-377-0390	No	Yes	No	No	No	Ramp
63.8L	Rivera Hotel Box 787 Fredericktown, PA 15333	724-377-1480	No	Yes	No	Yes	Yes	
63.8L	Paletta Sales & Service Rt. 88 Main St. Fredericktown, PA 15333	724-377-0123	No	No	No	No	No	Ramp

**MONONGAHELA RIVER
SMALL BOAT HARBORS, RAMPS, LANDING, ETC.**

MILE	FACILITY & ADDRESS	PHONE NO.	FUEL	REST.	GROCERIES	O'NIGHT MOORING	LODGING	REMARKS
63.9R	PA Fish Commission	None	No	No	No	No	No	Public Ramp.
64.0L	Fredericktown Cable Ferry	Not Available	No	No	No	No	No	Public Ferry 7:00 AM to 4:00 PM, 7 Days/Week.
64.9L	Al's Ark Dock Box 250 Fredericktown, PA 15337	724-377-0439	No	No	No	No	No	Sales.
65.2L	Landmark Hotel Box 111 Fredericktown, PA 15333	Not Available	No	Yes	No	Yes	Yes	Ramp.
65.6L	TENMILE CREEK (see sheet 18)							
68.5L	PA Fish Commission	None	No	No	No	No	No	Public Ramp.
71.0L	Rices Landing	None	No	No	No	No	No	Ramp.
72.8L	Jessop Boat Club 1055 Vermont Avenue Washington, PA 15301	724-966-6147	No	No	No	No	No	Ramp.
75.6R	Chuck's Boat Club RD #1 Box 187A Adan, PA 15410	724-737-6929	No	Yes	No	Yes	No	Ramp (Not Paved).
84.5LR	Boro of Greensboro	None	No	No	No	No	No	Public Ramp.
88.8L	Two Rivers Marina Box 212 Dillner, PA 15620	724-943-3795	No	Yes	Yes	Yes	Yes	Ramp, Campground.
90.3R	PA Fish Commission	None	No	No	No	No	No	Public Ramp.
95.3L	Riverside Marina Route 1 Box 239 Maidsville, WV 26541	(304)292-6148	Yes	No	No	Yes	No	Ramp.
98.0R	Boro of Star City	None	No	No	No	No	No	Public Ramp.

**MONONGAHELA RIVER
SMALL BOAT HARBORS, RAMPS, LANDING, ETC.**

MILE	FACILITY & ADDRESS	PHONE NO.	FUEL	REST.	GROCERIES	O'NIGHT MOORING	LODGING	REMARKS
101.0L	Morgantown Rowing Assoc. Box 824 Morgantown, WV 26055	(304)295-5240	No	No	No	No	No	Private Club.
101.1R	Morgantown Public Ramp	None	No	No	No	No	No	Public Ramp.
104.5R	West Virginia DNR	None	No	No	No	No	No	Booths Creek - Public Ramp (Not Paved).
104.6R	Twin Spruce Marina P.O. Box 604 Uffington, WV 26349	(304)363-4911	Yes	Yes	No	Yes	No	Ramp.
110.2R	Little Falls Boat Club Mouth of Toms' Run Morgantown, WV 26501	(304)542-7121	No	No	No	Yes	No	
112.5L	Six & Plum Campground & Marina P.O. Box 745 Brave, WV 15316	(304)983-8585	No	No	No	Yes	No	Campground & Marina.
120.1R	Catawba Public Ramp	None	No	No	No	No	No	
120.7R	Pricketts Bay Public Ramp	None	No	No	No	No	No	Operated by WV Dept of Natural Resources.
123.5L	Rivesville Docks	None	No	No	No	No	No	
127.1R	Marion Co. Parks & Rec. (DNR)	None	No	No	No	No	No	Public Ramp & Parking.
128.7R	TYGART RIVER (see sheet 19) YOUGHIOGHENY RIVER							
0.15-0.5R	McKeesport Point Marina	None	Yes	No	No	Yes	No	Ramp.

MONONGAHELA RIVER **SMALL BOAT HARBORS, RAMPS, LANDING, ETC.**

MILE	FACILITY & ADDRESS	PHONE NO.	FUEL	REST.	GROCERIES	O'NIGHT MOORING	LODGING	REMARKS
0.2L	PA Fish Commission	None	No	No	No	No	No	Public Ramp & Parking.
0.3L	River Road Marina 1651 Fifth Ave. McKeesport, PA 15122	(412)672-0780	No	No	No	No	No	
0.5L	Yough View Marina P.O. Box 789 McKeesport, PA 15132	(412)672-6232	No	No	No	No	No	
1.0L	Berties Landing 400 Pine Street McKeesport, PA 15132	(412)664-7404	No	No	No	Yes	No	
3.4L	PA Fish Commission	None	No	No	No	No	No	Ramp (Paved), Parking.
4.6L	Yough River Park & Lounge 12 St. & David St. Boston, PA 15132	(412)751-7052	No	Yes	No	Yes	No	Ramp, Fishing Supplies.
TENMILE CREEK								
0.1L	Engle's Holiday Harbor Box 124 Millsboro, PA 15348	(724)377-0151	Yes	Yes	No	Yes	No	Radio Watch, Open 9:00 to 9:00, Ramp.
0.2L	Dales Boat Basin Rt. 88, Box D Millsboro, PA 15348	(724)377-2882	Yes	No	No	Yes	No	Ramp.
0.25L	Ten Mile Yacht Club 111 Joyce Drive McMurray, PA	(724)745-0656	Yes	No	No	Yes	No	Private Ramp.
0.4L	Reeseaman's Dock Millsboro, PA 15348	Not Available	No	Yes	No	No	No	
0.4R	Green Cove Marina 10 Mile Creek, Box 84 Millsboro, PA 15348	(724)377-0184	Yes	Yes	No	Yes	No	Ramp, Campground.

**MONONGAHELA RIVER
SMALL BOAT HARBORS, RAMPS, LANDING, ETC.**

MILE	FACILITY & ADDRESS	PHONE NO.	FUEL	REST.	GROCERIES	O'NIGHT MOORING	LODGING	REMARKS
0.7R	Sunset Marina Rt.88 Box 161 Millsboro, PA 15348	(724)377-2737	Yes	No	No	Yes	No	Ramp.
0.9L	Tenmile Public Ramp	None	No	No	No	No	No	Operated by Washington County.
1.2L	Washington Co. Ramp	None	No	No	No	No	No	
	TYGART VALLEY RIVER							
0.5L	Earl E. Hawkins 104 Meadowlane Ave. Fairmont, WV 26554	(304)363-4896	No	No	No	Yes	No	Ramp (Paved).
2.5L	Woods Boat House 1920 Fairmont Ave. Fairmont, WV 26554	(304)363-2651	Yes	Yes	No	No	No	Ramp.
2.9L	Vaughn Pender Boat Dock Route 9, Box 320 Fairmont, WV 26554	(304)363-0009	Yes	No	No	No	No	Ramp (Paved).
				</				

MONONGAHELA RIVER
MILEAGE CHART

	POINT PITTSBURGH	HOMESTEAD	BRADDOCK L/D	YOUGHIOGHENY R. MCKEESPORT	CLAIRTON	LOCK & DAM 3	ELRAMA	MONONGAHELA	LOCK & DAM 4	BELLE VERNON	CALIFORNIA	BROWNSVILLE	MAXWELL L/D	TENMILE CR. COUNTY LINE	RICES LANDING	ISABELLA	GRAYS LANDING L/D	CHEAT RIVER	POINT MARION L/D	PA./W. VA. STATE LINE	VAN VOORHIS	MORGANTOWN	MORGANTOWN L/D	HILDEBRAND	HILDEBRAND L/D	OPEKISKA L/D	CATAWBA	FAIRMONT	W. FORK/TYGART RIVERS
POINT PITTSBURGH																													
HOMESTEAD	7.5																												
BRADDOCK L/D	11.2	3.7																											
YOUGH. R. MCKEESPORT	15.5	8.0	4.3																										
CLAIRTON	20.7	13.2	9.5	5.2																									
LOCK & DAM 3	23.8	16.3	12.6	8.3	3.1																								
ELRAMA	25.5	18.0	14.3	10.0	4.8	1.7																							
MONONGAHELA	31.5	24.0	20.3	16.0	10.8	7.7	6.0																						
LOCK & DAM 4	41.5	34.0	30.3	26.0	20.8	17.7	16.0	10.0																					
BELLE VERNON	43.7	36.2	32.5	28.2	23.0	19.9	18.2	12.2	2.2																				
CALIFORNIA	51.7	44.2	40.5	36.2	31.0	27.9	26.2	20.2	10.2	8.0																			
BROWNSVILLE	56.4	48.9	45.2	40.9	35.7	32.6	30.9	24.9	14.9	12.7	4.7																		
MAXWELL L/D	61.2	53.7	50.0	45.7	40.5	37.4	35.7	29.7	19.7	17.5	9.5	4.8																	
TENMILE CR. COUNTY LINE	65.7	58.2	54.5	50.2	45.0	41.9	40.2	34.2	24.2	22.0	14.0	9.3	4.5																
RICES LANDING	68.8	61.3	57.6	53.3	48.1	45.0	43.3	37.3	27.3	25.1	17.1	12.4	7.6	3.1															
ISABELLA	71.8	64.3	60.6	56.3	51.1	48.0	46.3	40.3	30.3	28.1	20.1	15.4	10.6	6.1	3.0														
GRAYS LANDING L/D	82.0	74.5	70.6	66.5	61.3	58.2	56.5	50.5	40.5	38.3	30.3	25.6	20.8	16.3	13.2	10.2													
CHEAT RIVER	89.6	82.1	78.4	74.1	68.9	65.8	64.1	58.1	48.1	45.9	37.9	33.2	28.4	23.9	20.8	17.8	12.1												
POINT MARION L/D	90.8	83.3	79.6	75.3	70.1	67.0	65.3	59.3	49.3	47.1	39.1	34.4	29.6	25.1	22.0	19.0	13.3	1.2											
PA./W. VA. STATE LINE	91.3	83.8	80.1	75.8	70.6	67.5	65.8	59.8	49.8	47.6	39.6	34.9	30.1	25.6	22.5	19.5	13.8	1.7	0.5										
VAN VOORHIS	95.1	87.6	83.9	79.6	74.4	71.3	69.6	63.6	53.6	51.4	43.4	38.7	33.9	29.4	26.3	23.3	17.6	5.5	4.3	3.8									
MORGANTOWN	101.0	93.5	89.8	85.5	80.3	77.2	75.5	69.5	59.5	57.3	49.3	44.6	39.8	35.3	32.2	29.2	23.5	11.4	10.2	9.7	5.9								
MORGANTOWN L/D	102.0	94.5	90.8	86.5	81.3	78.2	76.5	70.5	60.5	58.3	50.3	45.6	40.8	36.3	33.2	30.2	24.5	12.4	11.2	10.7	6.9	1.0							
HILDEBRAND	104.6	97.1	93.4	89.1	83.9	80.8	79.1	73.1	63.1	60.9	52.9	48.2	43.4	38.9	35.8	32.8	27.1	15.0	13.8	13.3	9.5	3.6	2.6						
HILDEBRAND L/D	108.0	100.5	96.8	92.5	87.3	84.2	82.5	76.5	66.5	64.3	56.3	51.6	46.8	42.3	39.2	36.2	30.5	18.4	17.2	16.7	12.9	7.0	6.0	3.4					
OPEKISKA L/D	115.4	107.9	104.2	99.9	94.7	91.6	89.9	83.9	73.9	71.7	63.7	59.0	54.2	49.7	46.6	43.6	37.9	25.8	24.6	24.1	20.3	14.4	13.4	10.8	7.4				
CATAWBA	119.7	112.2	108.5	104.2	99.0	95.9	94.2	88.2	78.2	76.0	68.0	63.3	58.5	54.0	50.9	47.9	42.2	30.1	28.9	28.4	24.6	18.7	17.7	15.1	11.7	4.3			
FAIRMONT	126.7	119.2	115.5	111.2	106.0	102.9	101.2	95.2	85.2	83.0	75.0	70.3	65.5	61.0	57.9	54.9	49.2	37.1	35.9	35.4	31.6	25.7	24.7	22.1	18.7	11.3	7.0		
W. FORK/TYGART RIVERS	128.7	121.2	117.5	113.2	108.0	104.9	103.2	97.2	87.2	85.0	77.0	72.3	67.5	63.0	59.9	56.9	51.2	39.1	37.9	37.4	33.6	27.7	26.7	24.1	20.7	13.3	9.0	2.0	